

U.S. Coast Guard Oceanographic Report

UNITED STATES COAST GUARD
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REPORT No. 51

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INVESTIGATION OF THE
WEDDELL SEA COASTAL CURRENT
FEBRUARY-MARCH 1970



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UNITED STATES COAST GUARD OCEANOGRAPHIC UNIT

REPORT No. 51 CG 373-51

INVESTIGATION OF THE WEDDELL SEA COASTAL CURRENT

FEBRUARY-MARCH 1970

Gary L. Hufford
James M. Seabrooke





Abstract

A physical and chemical investigation of the Weddell Sea Coastal Current was made during the austral summer of 1970 as part of the International Weddell Sea Oceanographic Expedition. This Coastal Current has been hypothesized to be a major component in the formation of Antarctic Bottom Water. The 1970 data indicated that the Coastal Current existed from the surface to the abyssal depths in the eastern Weddell Sea and that it decreased in temperature and increased in salinity as it flowed south over the continental shelf. This may be due to alteration of the shelf water as it flowed along and under the extensive ice shelves along the east coast or surface cooling. Nutrient concentrations below the surface layer remained relatively constant from station to station on the shelf. From the edge of the shelf to the depth of 2000 meters Warm Deep Water was found to have the highest nutrient concentrations. This warm water is believed to be carried into the Weddell Sea by a branch of the Circumpolar Current. Origin of the abyssal water in the eastern Coastal Current is unknown.

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Investigation of the Weddell Sea Coastal Current February-March 1970

Gary L. Hufford¹

James M. Seabrooke²

INTRODUCTION

The Coastal Current in the Weddell Sea has been hypothesized as a major component in the formation of Antarctic Bottom Water (Seabrooke, Hufford, and Elder, 1971), but only a few observations have been made in it. This current has been found to exist from the surface to the bottom in the eastern Weddell Sea exhibiting uniformity in current direction (southerly) (Gordon, 1970). Sverdrup, et al. (1942), suggested that the westward flow of the Coastal Current east of the Weddell Sea is due to an extensive clockwise gyre which occurs in the Southern Ocean.

DATA ACQUISITION

From February 14 to March 21, 1970, an oceanographic investigation (32 stations) of the eastern Weddell Sea Coastal Current by the Coast Guard Oceanographic Unit was conducted aboard the icebreaker USCGC GLACIER (WAGB-4) as part of the International Weddell Sea Oceanographic Expedition (fig. 1). Hydrographic data were obtained using Nansen bottles with reversing thermometers, current meters, and a continuous salinity-temperature-depth recording system (STD) with a Niskin multisampler attached. Sampling was conducted to as close to the sea floor as possible. The resulting water samples were analyzed manually at sea for dissolved oxygen, inorganic phosphate, nitrate, nitrite, and silicate using the techniques described in the manual of Strickland and Parsons (1965). Salinity was

determined using an inductive salinometer. The conductivity values obtained were converted to salinity by use of the International Oceanographic Tables published jointly by UNESCO and the National Institute of Oceanography of Great Britain (1966). A summary of data collected at each station is given in Table 1.

Direct measurements of currents from the surface to the bottom were made at Halley Bay (fig. 1). The ship was anchored to the fast ice and continuous measurements were taken for two days. The current data are being processed by the University of Bergen, Norway, and the results will not be reported here.

Eight oceanographic stations of opportunity were occupied in the Bransfield Strait region during 6-29 January 1970 to determine if any flow of Antarctic Bottom Water from the Weddell Sea occurred there as suggested by Hollister and Elder (1969). The data indicated water with Antarctic Bottom Water characteristics (-4°C , 34.66 ‰) was not present.

WATER MASS DISTRIBUTION

Analysis of the temperature-salinity relations of the data obtained during IWSOE-70, revealed three water masses present in the Coastal Current: Antarctic Surface Water, Warm Deep Water, and a Bottom Water (fig. 2). The properties of these three water masses (Table 2) closely resemble those observed previously by Hufford and Seabrooke (1970).

Above the eastern continental shelf of the Weddell Sea, the water column is occupied by one water mass, Antarctic Surface Water ($T=-0.8$ to -1.9°C , $S=33.50$ to 34.50‰) (fig. 2). This water mass shows an increase in

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**Table 1. IWSOE '70
OCEANOGRAPHIC STATION SUMMARY**

STA NO.	POSITION		N A N S E T N A	N A N D S E E P	S T O	N I S K I N	C O R E	P H O T O	P L A N K T O N	CHEMISTRY					DEPTH IN METERS	DATE 1970
	LAT.	LONG.								O ₂	NO ₂	NO ₃	PO ₄	SiO ₃		
1	74°21.5'S	38°18'W	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	512	19 FEB
2	76°35.6'S	31°45.0'W			✓	✓		✓		✓	✓	✓	✓	✓	390	21 FEB
3	76°50.4'S	32°30.0'W			✓						✓	✓	✓	✓	310	21 FEB
4	76°55.1'S	32°47.5'W			✓		✓				✓	✓	✓	✓	322	21 FEB
5	77°26.5'S	36°01.7'W	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	901	01 MAR
6	77°34.6'S	35°39.9'W	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	585	03 MAR
7	77°33.0'S	35°38.1'W			✓										575	03 MAR
8	76°24.6'S	30°36.2'W	✓			✓			✓	✓	✓	✓	✓	✓	320	06 MAR
*9	75°25.5'S	26°28.5'W			✓		✓								238	07 MAR
10	75°25.5'S	26°28.5'W	✓			✓			✓	✓	✓	✓	✓	✓	235	08 MAR
11	75°25.5'S	26°28.5'W			✓										235	08 MAR
12	75°25.5'S	26°28.5'W	✓			✓		✓	✓	✓	✓	✓	✓	✓	235	08 MAR
13	75°25.5'S	26°28.5'W			✓				✓	✓	✓	✓	✓	✓	235	08 MAR
14	75°25.5'S	26°28.5'W	✓			✓			✓	✓	✓	✓	✓	✓	235	09 MAR
15	75°25.5'S	26°28.5'W			✓										235	09 MAR
16	75°25.5'S	26°28.5'W	✓			✓			✓	✓	✓	✓	✓	✓	235	09 MAR
17	75°25.5'S	26°28.5'W			✓				✓	✓	✓	✓	✓	✓	235	09 MAR
18	74°54.0'S	27°14.4'W	✓		✓	✓			✓	✓	✓	✓	✓	✓	410	10 MAR
19	74°52.3'S	25°47.1'W	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	481	10 MAR
20	74°28.5'S	25°40.6'W	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	506	11 MAR
21	73°58.7'S	23°39.0'W	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	274	11 MAR
22	73°38.0'S	23°40.0'W	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	1456	11 MAR
23	72°08.2'S	24°08.8'W	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	4078	12-13 MAR
24	71°14.8'S	24°32.0'W	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	4200	13-14 MAR
25	70°25.2'S	24°33.1'W	✓			✓	✓		✓	✓	✓	✓	✓	✓	4279	14 MAR
26	69°31.2'S	24°57.2'W	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	4572	14-15 MAR
27	71°03.3'S	13°16.0'W	✓		✓	✓			✓	✓	✓	✓	✓	✓	1920	15-16 MAR
28	71°04.0'S	12°09.2'W			✓		✓		✓						1189	17 MAR
29	71°10.0'S	12°22.7'W	✓			✓			✓	✓	✓	✓	✓	✓	465	17 MAR
30	70°57.5'S	11°21.6'W			✓										320	17-18 MAR
31	70°21.0'S	08°55.0'W	✓			✓	✓		✓	✓	✓	✓	✓	✓	503	18 MAR
32	70°20.8'S	07°29.8'W			✓		✓								740	18 MAR

*current meter station at Station No. 9 through 18 (Halley Bay)

salinity and a decrease in temperature as it flows into the Weddell Sea. This modification of properties is shown in a T-S diagram (fig. 3) where an "upstream" station (sta. 31) is compared to a "downstream" station (sta. 5). These changes are probably due to freezing of the shelf water as it flows south along and un-

der the extensive ice shelves of the east coast or surface cooling at the sea-air interface, which may be very rapid during periods of strong gradient winds.

A temperature maximum of -1.5 to -1.6 °C was found between 100 and 125 meters in the Antarctic Surface Water at stations 5, 6, and 7

TABLE 2.—*Properties of water masses in the Weddell Sea Coastal Current during IWSOE-70.*

Water mass	Temperature and salinity	PO _{4p} mean (μg-at/l)	Number of samples	NO _{3p} mean (μg-at/l)	Number of samples
Antarctic Surface Water	T = -0.8 to -1.9 °C S = 33.50 to 34.50‰	1.70 ± .11	71	22.66 ± 2.13	67
Warm Deep Water	T = 0.0 to 0.6 °C S = 34.65 to 34.70‰	1.31 ± .10	23	14.85 ± 1.97	26
Eastern Weddell Sea Bottom Water	T = -0.2 to -0.3 °C S = 34.65 to 34.66‰	1.32 ± .13	7	17.24 ± 2.23	7

PO_{4p}, NO_{3p} = Preformed phosphate and nitrate.

(fig. 6). This feature has not been described before and its origin is unknown.

Past investigations have rarely found water temperatures below -1.8 °C in the Antarctic Surface Water east of 35°W (Lusquinos, 1963). However, low temperatures were observed in two different areas east of 35°W during 1970. In the Halley Bay area (stations 9 through 17), temperatures as low as -1.98 °C were observed with salinities ranging between 34.0 and 34.4‰ (figs. 4 and 5). This cold water was evident from the surface to the bottom suggesting formation at the surface, probably by intense cooling and evaporation imposed on the surface by gradient winds. During the occupation of the stations at Halley Bay, continuous winds of 40 knots were measured.

The area sampled near Halley Bay was in a polynya extending over 600 miles, which is a seasonal feature of the Weddell Sea. In the summer, southwesterly winds predominate in the area (Gordon, 1970). Since the direction of ice drift is approximately 45° to the left in the southern hemisphere, the pack ice would concentrate to the north leaving open the polynya in the eastern portion of the Weddell Sea. The mechanism which prevents the closing of the polynya by freezing is unknown. The heat content of the subsurface shelf water is not sufficient to prevent ice formation if it were brought to the surface by some upward process (convection, diffusion). The probable answer is that the surface water does freeze but the action of wind and currents removes the ice. The southward flowing average surface current in the area of Halley Bay is quite slow (Kvinge, 1969) and probably does not play a major role in removal of ice.

Another possible mechanism preventing the closing of the polynya by freezing is the formation of ice in small crystals kept separate and in suspension in the water by turbulence from the action of the wind. The formation of ice crystals in the surface layers has been studied by Littlepage (1965) and Zubov (1945). They found that the ice crystals were carried by vertical mixing to a depth where they would melt because of lowered freezing point (due to pressure). The heat required for melting the ice would come from the surrounding water, lowering its temperature further, possibly explaining the colder temperatures near the bottom at Halley Bay.

Sea water with temperatures near the freezing point was observed in the southeastern Weddell Sea at stations 5, 6, and 7 (fig. 6). Water temperatures below the freezing point were recorded at 19 subsurface levels (below 250 meters) at the three stations. All three stations are located near the Filchner Ice Shelf in a deep depression on the continental shelf. The greatest depth measured in the depression was 1200 meters with a sill depth of 400 meters (Kvinge, 1969). The underside of the edge of the ice shelf is approximately 250 meters below sea level, increasing to over 500 meters before the ice contacts the sea floor shoreward (Zumberge and Swithinbank, 1965). The salinity of the upper 250 meters at the three stations was less than 34.40‰, which is less than the salinity of the deeper cold water. Since no advection of near freezing water at depth in the Coastal Current was observed, it is reasonable to conclude that the very cold water was derived by freezing either at the surface or at the underside of the ice shelf.

From the edge of the continental shelf to a depth of 2000 meters, a relatively warm, saline water mass exists in the Weddell Sea Coastal Current (fig. 2). This water mass, called Warm Deep Water by Deacon (1937), is the major mass in the Coastal Current. We found it characterized by above-zero temperatures (0.0 to 0.6 °C) and salinities of 34.65 to 34.70‰. Deacon (1963) stated that this water mass consists of a mixture of Antarctic Circumpolar Water and small amounts of North Atlantic Deep Water. A. Gordon (personal communication) believes that part of the Warm Deep Water is bottom water from the Southeast Pacific Basin.

Origin of the bottom water in the eastern Weddell Sea (east of 35°W, fig. 2) is unknown. The first detailed description of this water mass, called Eastern Weddell Sea Bottom Water, was given by Seabrooke, Hufford, and Elder (1971). They found (during IWSOE 1968, 1969) the water mass properties to be slightly different from Antarctic Bottom Water. Results of the 1970 cruise (Table 2) substantiate this. They also suggested that Eastern Weddell Sea Bottom Water may be composed of deep Circumpolar Water and recirculated Antarctic Bottom Water, the Antarctic Bottom Water being the largest component. Further investigation is necessary to determine the origin of this water mass.

OXYGEN AND NUTRIENT DISTRIBUTION

Dissolved oxygen was measured at all stations where Nansen casts were made. Concentrations exceeded 7.1 ml/l on the continental shelf, with maximum concentrations of up to 8.9 ml/l occurring in the near-surface layers (fig. 7). The Warm Deep Water had the lowest dissolved oxygen content (4.2 to 4.9 ml/l) in the Weddell Sea, and Eastern Weddell Sea Bottom Water had slightly higher concentrations (5.2 to 5.6 ml/l) (fig. 7). Percent saturation, computed from solubility relationships developed by Green and Carritt (1967), varied from 90–97% in Antarctic Surface Water to 59–60% in the Warm Deep Water and 62–68% in the Eastern Weddell Sea Bottom Water. A possible reason for the higher saturation values in Eastern Weddell Sea Bottom Water is recirculation of some Antarctic Bottom Water back

into the Weddell Sea by way of the Antarctic Coastal Current where it is mixed with deep Circumpolar Water to form Eastern Weddell Sea Bottom Water. Antarctic Bottom Water formed in the Weddell Sea has a high saturation value (about 80%, Hufford and Tennyson, 1970) because of recent contact of one of its components (shelf water) with the sea surface.

According to Clowes (1938), the nutrient concentrations in the Antarctic rarely fall below the winter maximum concentrations of temperate regions. Concentrations of the various nutrients measured in the Weddell Sea support this. Ranges of concentrations found in 1970 were:

inorganic	
phosphate	0.6–2.5 µg-at/l.
nitrate—	
Nitrogen	14.0–33.0 µg-at/l.
nitrite—	
Nitrogen	0.1–0.5 µg-at/l.
silicate—	
Silicon	32–125 µg-at/l.

In general the vertical distributions of the nutrients in the Weddell Sea (figs. 8–13) fit the classical description. On the continental shelf, phosphate, nitrate, and silicate concentrations increased with depth to about 100 meters, then remained fairly constant to the bottom (figs. 8–10). Off the shelf, the nutrients increased with depth until a maximum was reached between 800 and 1000 meters (figs. 11–13). Below the maximum, concentrations decreased slightly and then remained constant to the bottom.

To differentiate further the principal water masses involved in the Weddell Sea Coastal Current, preformed phosphate and nitrate concentrations were computed using the equations of Pytkowicz (1968). Oxidative ratios were estimated from the changes in the concentration of oxygen and nutrient ions. Preformed concentrations were computed only from samples below 75 meters to eliminate discrepancies that exist in the surface layer because of exchange of oxygen with the atmosphere and mixing of the surface waters. Mean values and variation about the mean were computed separately for Antarctic Surface Water, Warm Deep Water, and Eastern Weddell Sea Bottom Water

(Table 2). The preformed nutrient concentrations in the Warm Deep Water and Eastern Weddell Sea Bottom Water are almost identical and significantly lower than that of Antarctic Surface Water. Because of the similarity in preformed values, Warm Deep Water and

Eastern Weddell Sea Bottom Water can only be separated by temperature, salinity, and oxygen characteristics. The 1970 preformed nutrient concentrations correspond closely with the 1968 and 1969 values found by Hufford and Seabrooke (1970).

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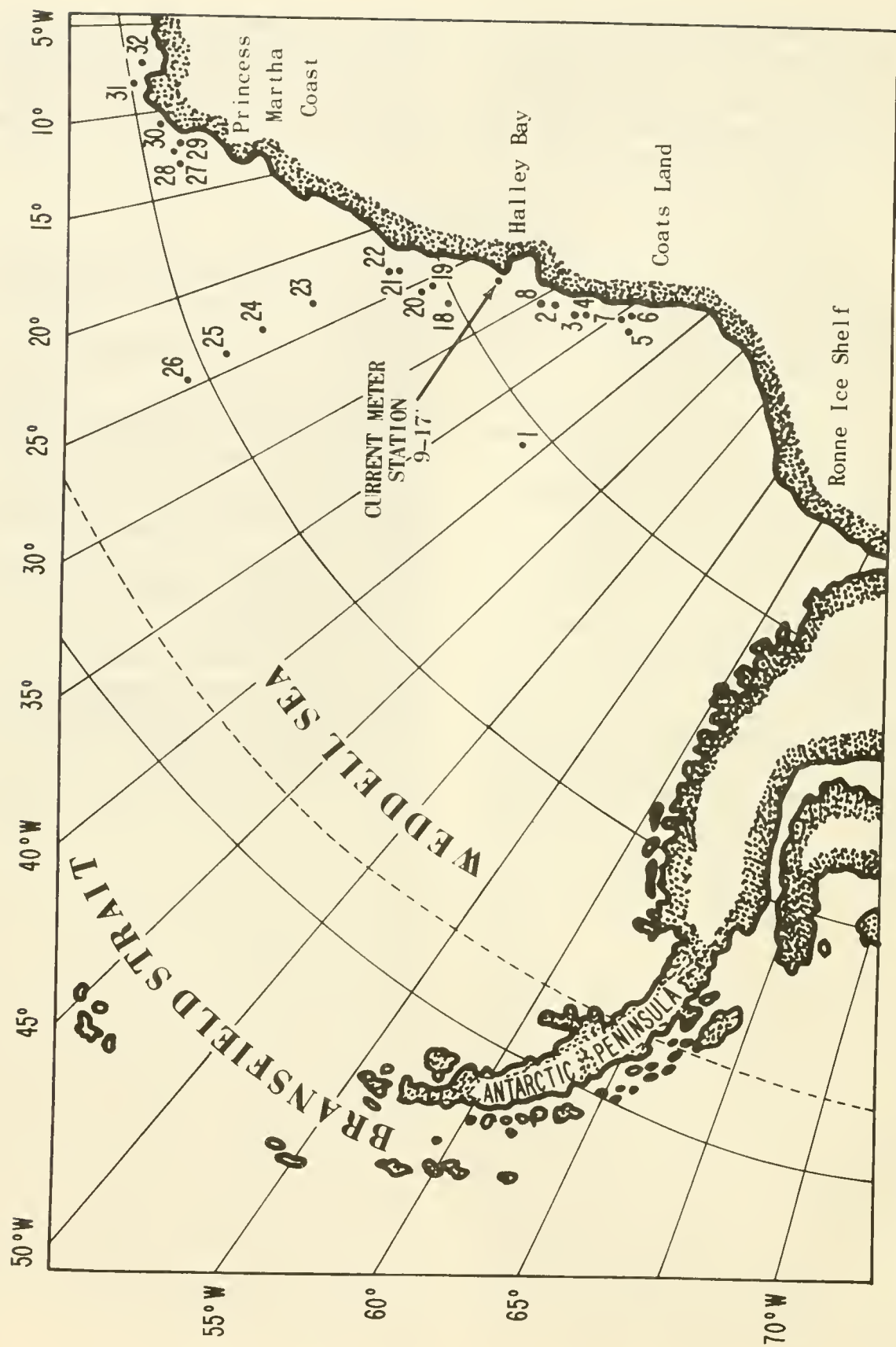


FIGURE 1. Location of stations for the 1970 International Weddell Sea Oceanographic Expedition (IWSOE-70), 14 February-21 March 1970.

TEMPERATURE °C

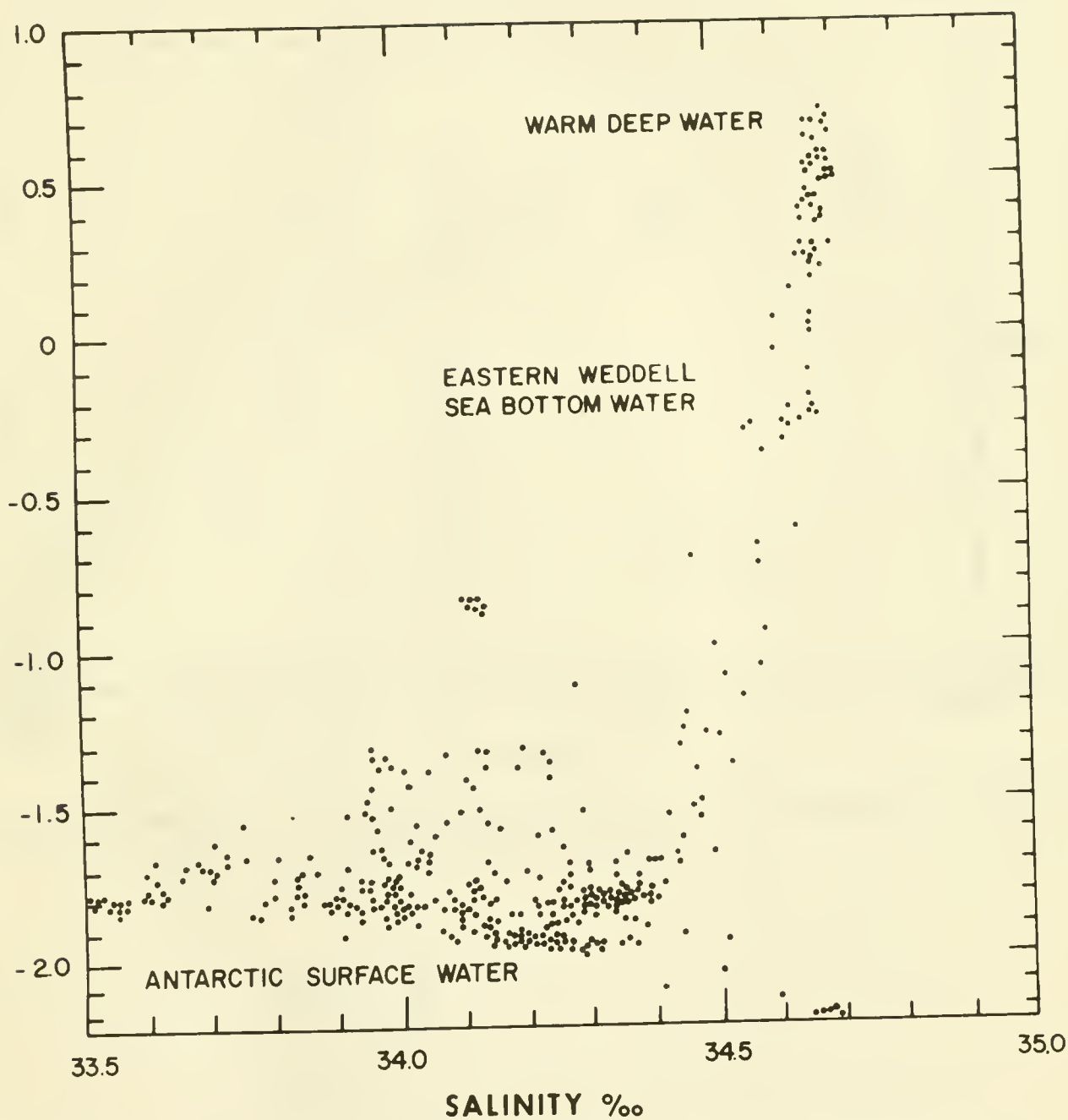


FIGURE 2. Scatter plot of temperature (°C)-salinity (‰) from all the stations taken in the eastern Weddell Sea during IWSOE-70, 14 February-21 March 1970.

TEMPERATURE °C

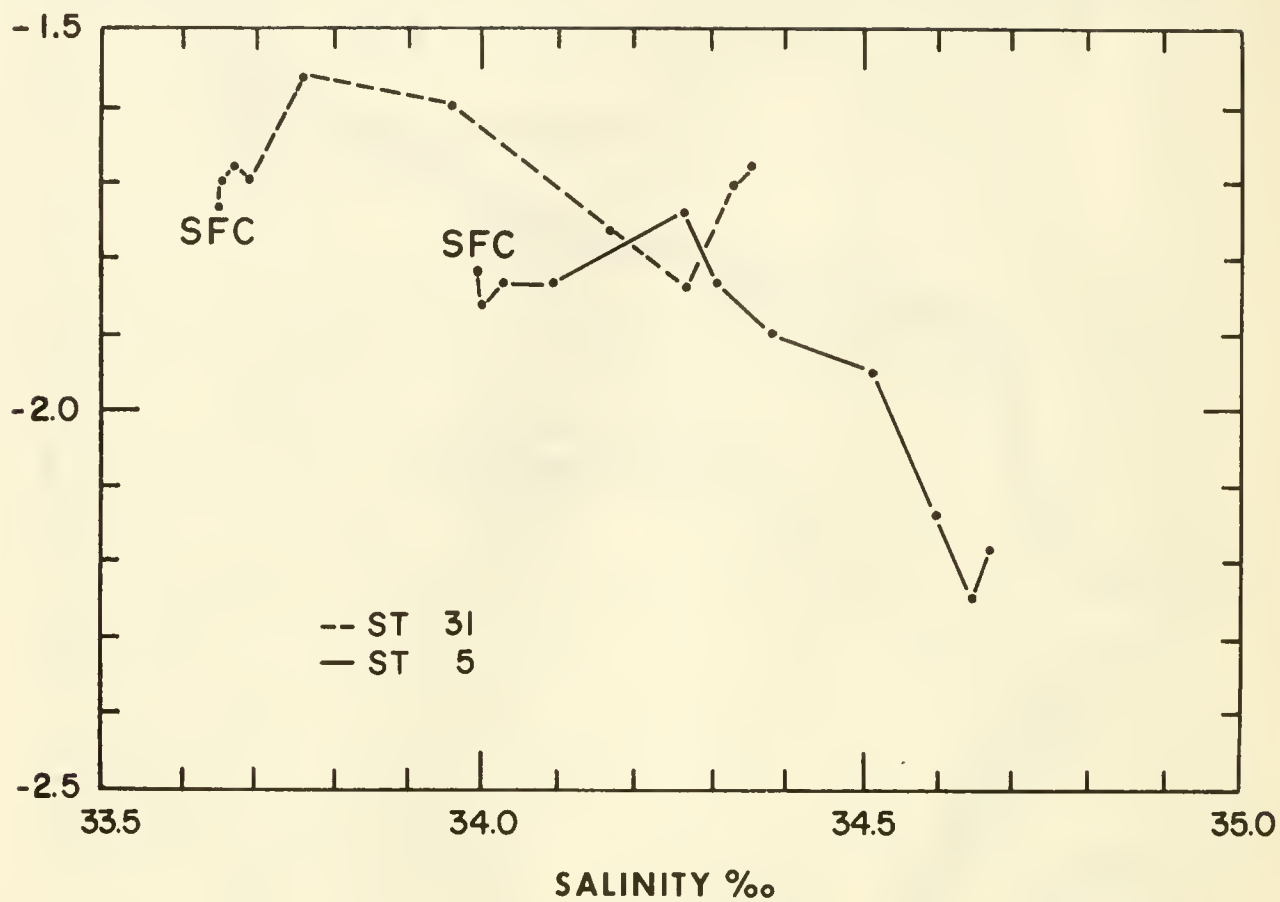


FIGURE 3. Temperature (°C)-salinity (‰) diagram of stations 5 and 31 from IWSOE-70, 14 February-21 March 1970.

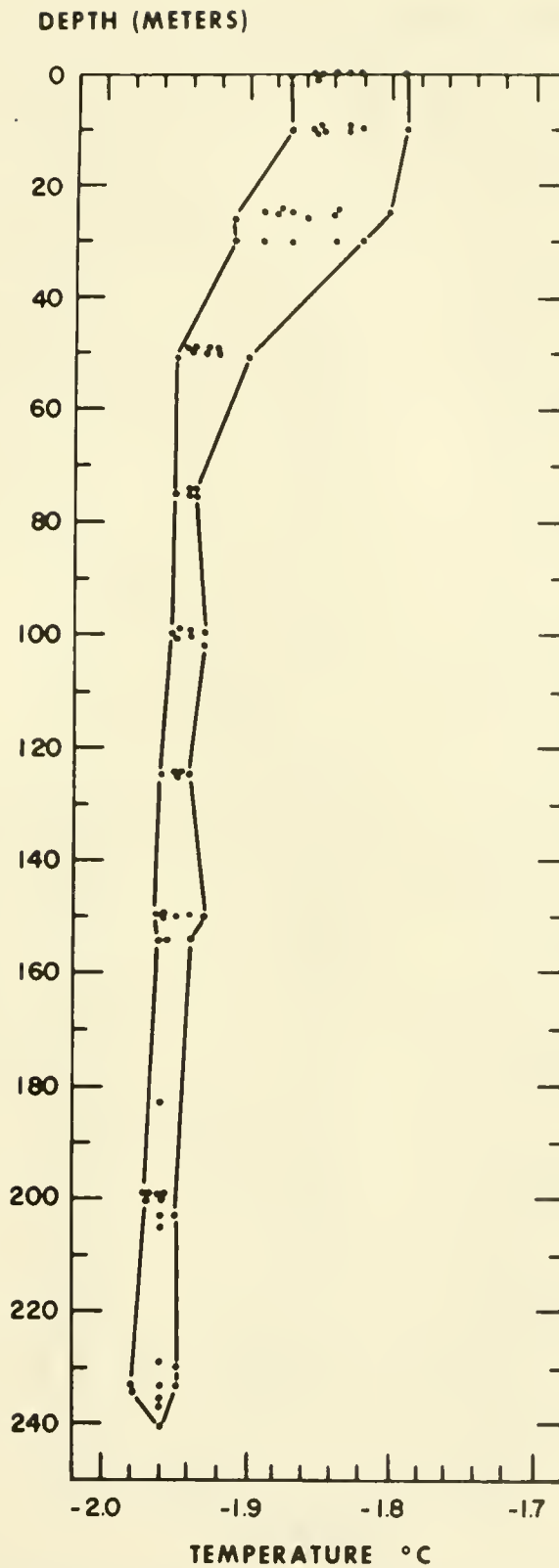


FIGURE 4. Envelope of temperature ($^{\circ}\text{C}$) versus depth (m) for stations 9 through 17 from IWSOE-70, 14 February-21 March 1970.

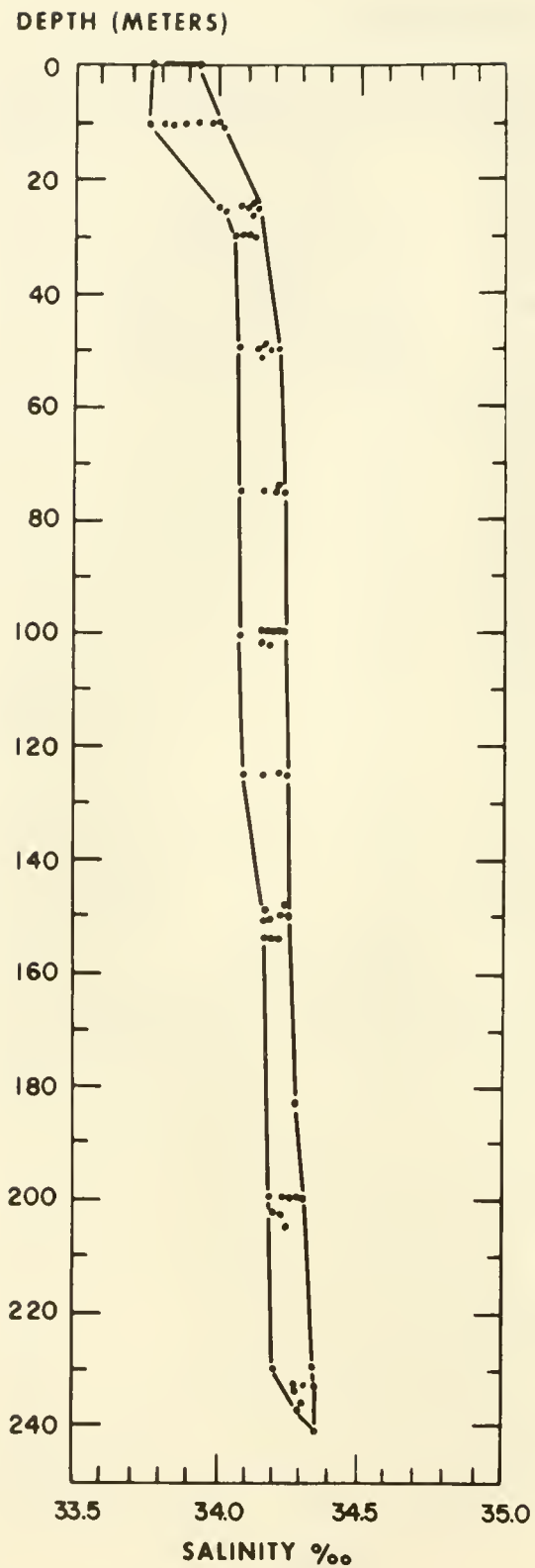


FIGURE 5. Envelope of salinity (‰) versus depth (m) for stations 9 through 17 from IWSOE-70, 14 February-21 March 1970.

TEMPERATURE °C

DEPTH (METERS)

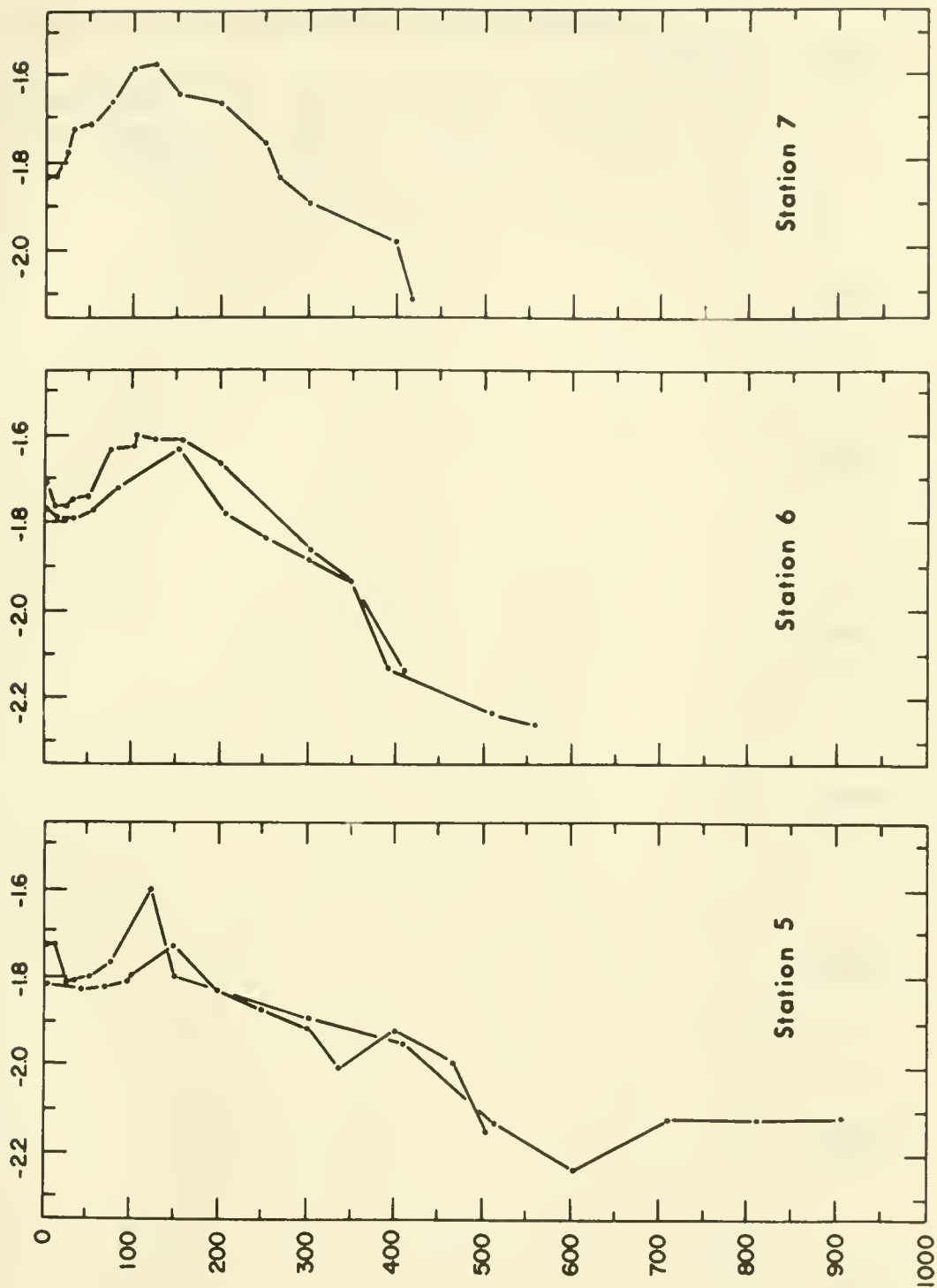


FIGURE 6. Temperature (°C) versus depth (m) for stations 5, 6, and 7 from IWSOE-70, 14 February-21 March 1970. Shallow casts by STD. Deeper casts by Nansen bottles.

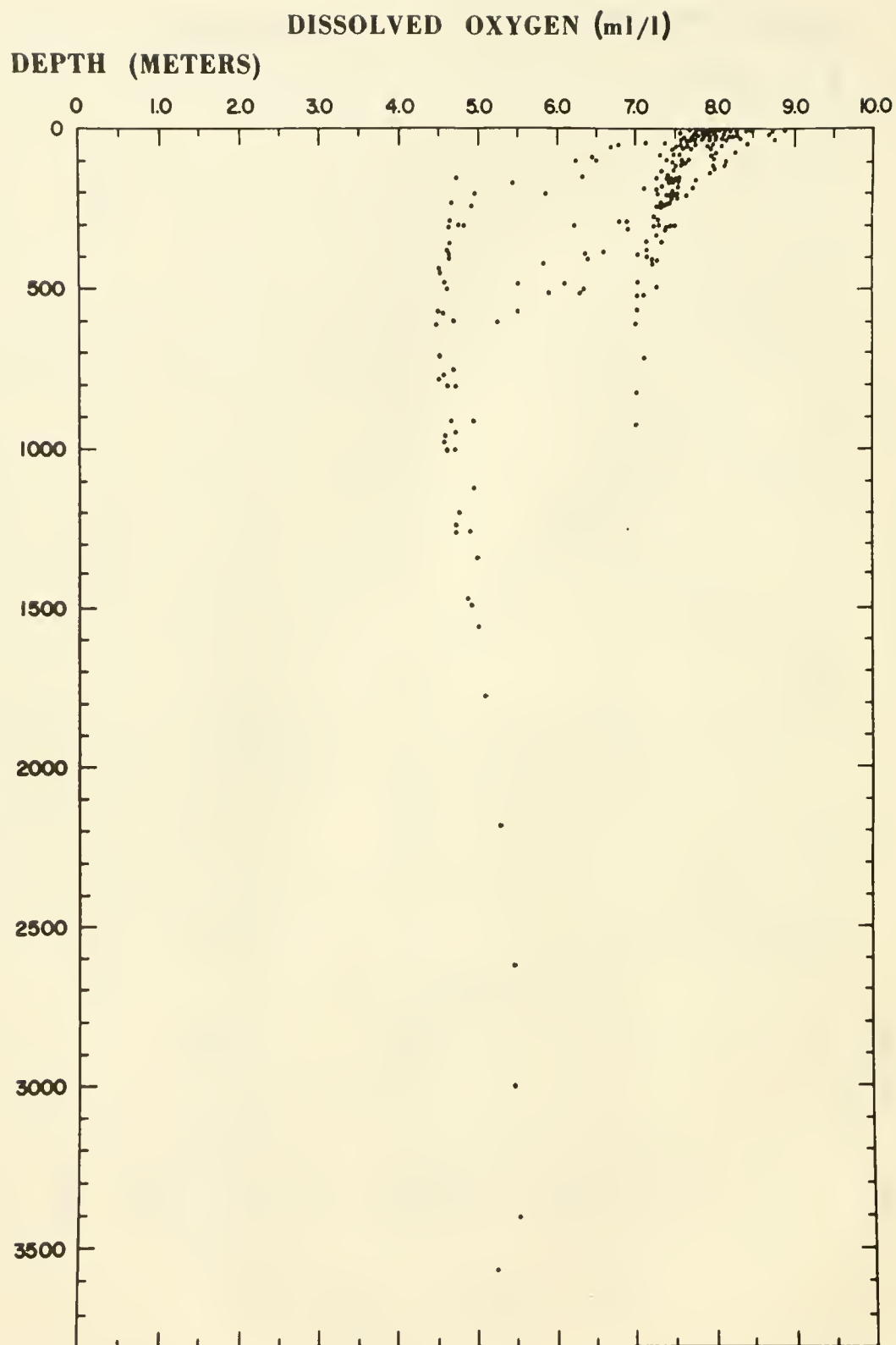


FIGURE 7. Dissolved oxygen (ml/l) versus depth (m) for all stations taken during IWSOE-70, 14 February-21 March 1970.

INORGANIC PHOSPHATE - P ($\mu\text{g-at/L}$)
DEPTH (METERS)

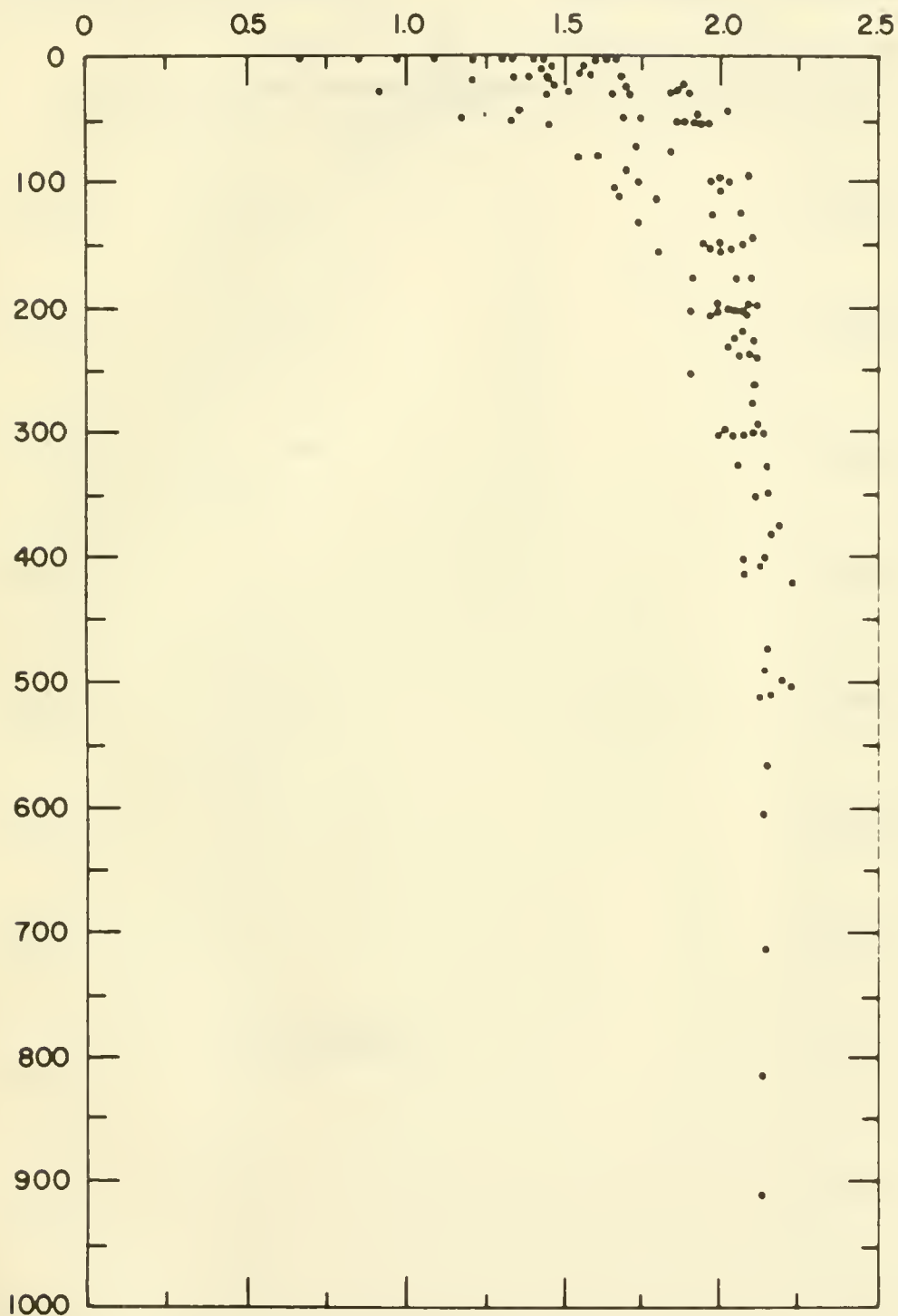


FIGURE 8. Envelope of inorganic phosphate ($\mu\text{g-at/l}$) versus depth (m) for all shelf stations taken during IWSOE-70, 14 February-21 March 1970.

REACTIVE NITRATE - N ($\mu\text{g-at/L}$)
DEPTH (METERS)

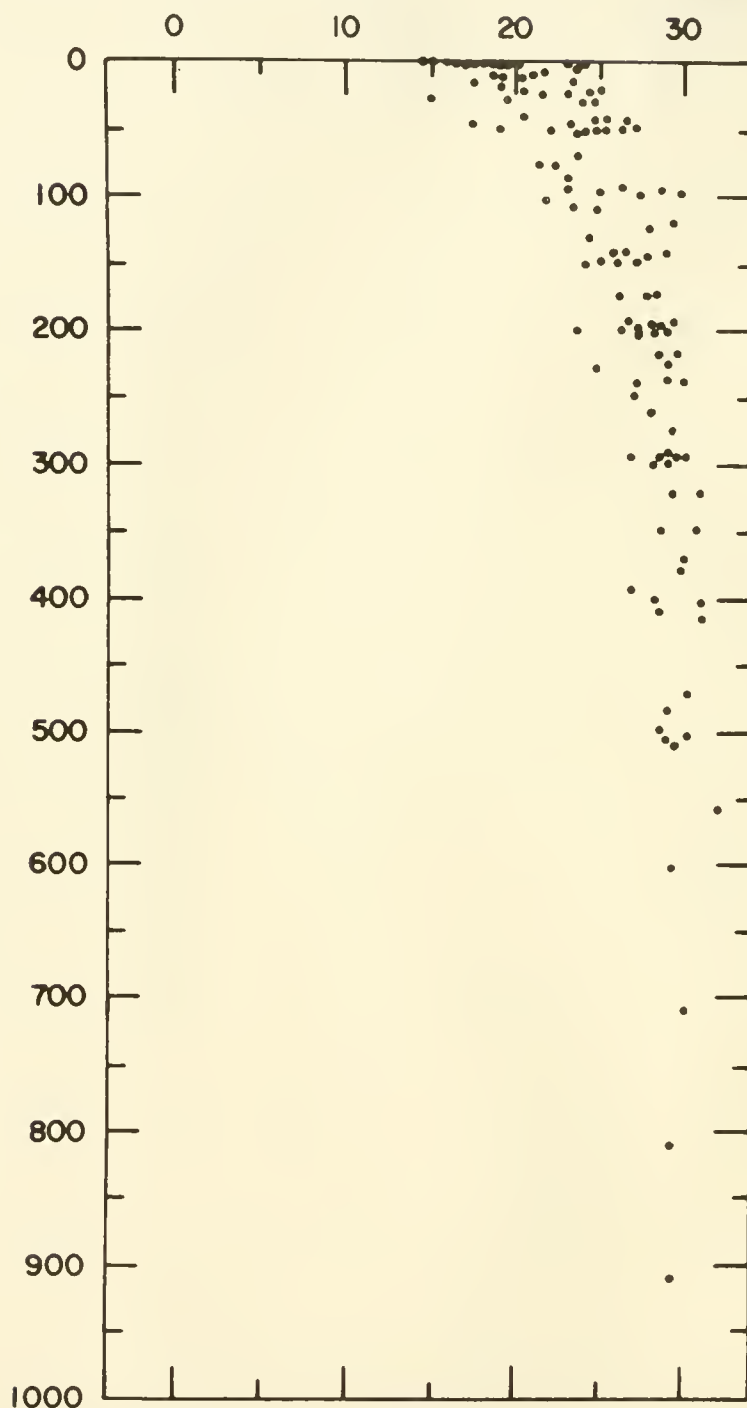


FIGURE 9. Envelope of nitrate ($\mu\text{g-at/l}$) versus depth (m) for all shelf stations taken during IWSOE-70, 14 February-21 March 1970.

SILICATE - Si ($\mu\text{g-at/L}$)

DEPTH (METERS)

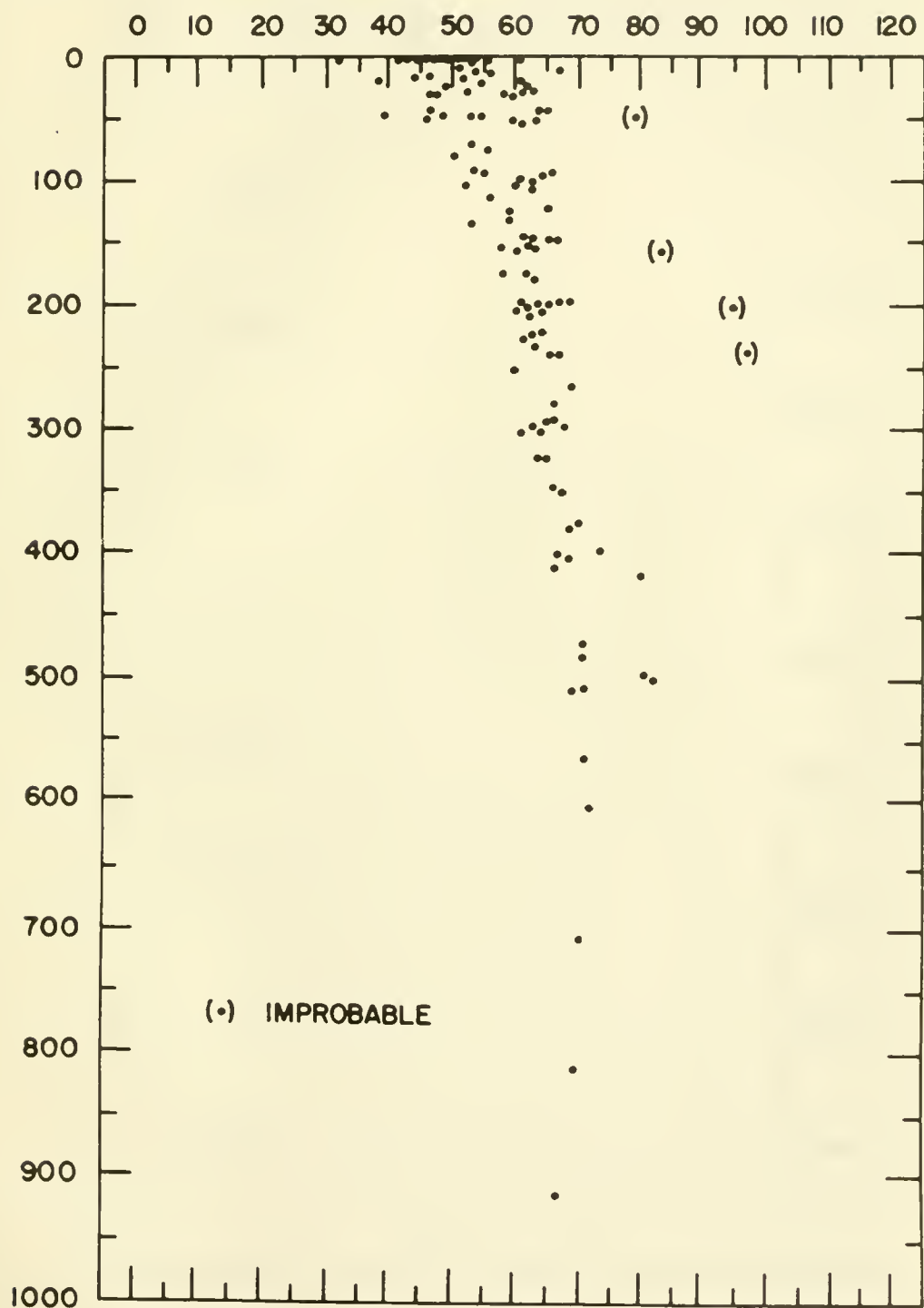


FIGURE 10. Envelope of silicate ($\mu\text{g-at/l}$) versus depth (m) for all shelf stations taken during IWSOE-70, 14 February-21 March 1970.

INORGANIC PHOSPHATE · P ($\mu\text{g-at/L}$)
DEPTH (METERS)

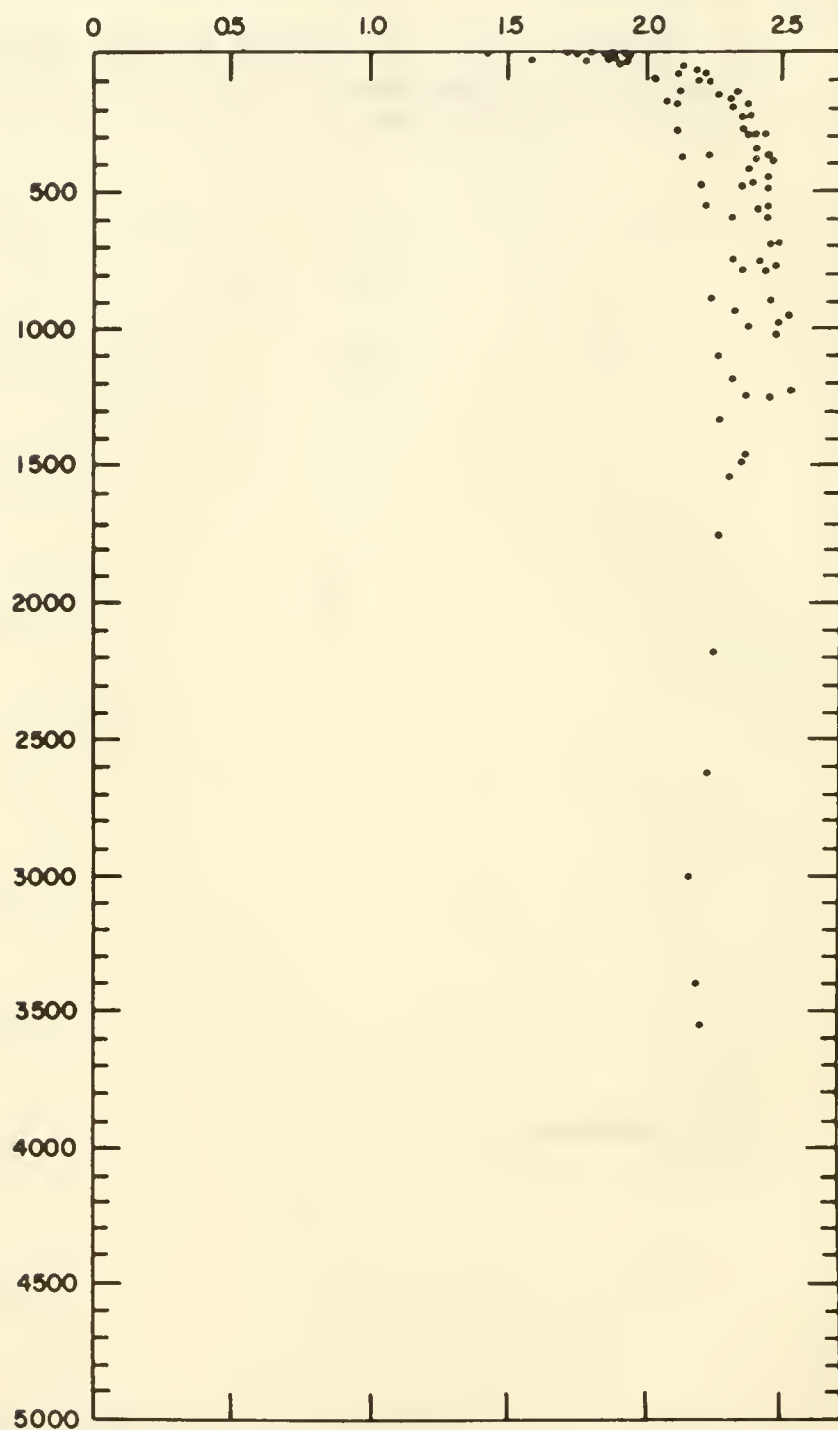


FIGURE 11. Envelope of inorganic phosphate ($\mu\text{g-at/l}$) versus depth (m) for all deep stations taken during IWSOE-70, 14 February-21 March 1970.

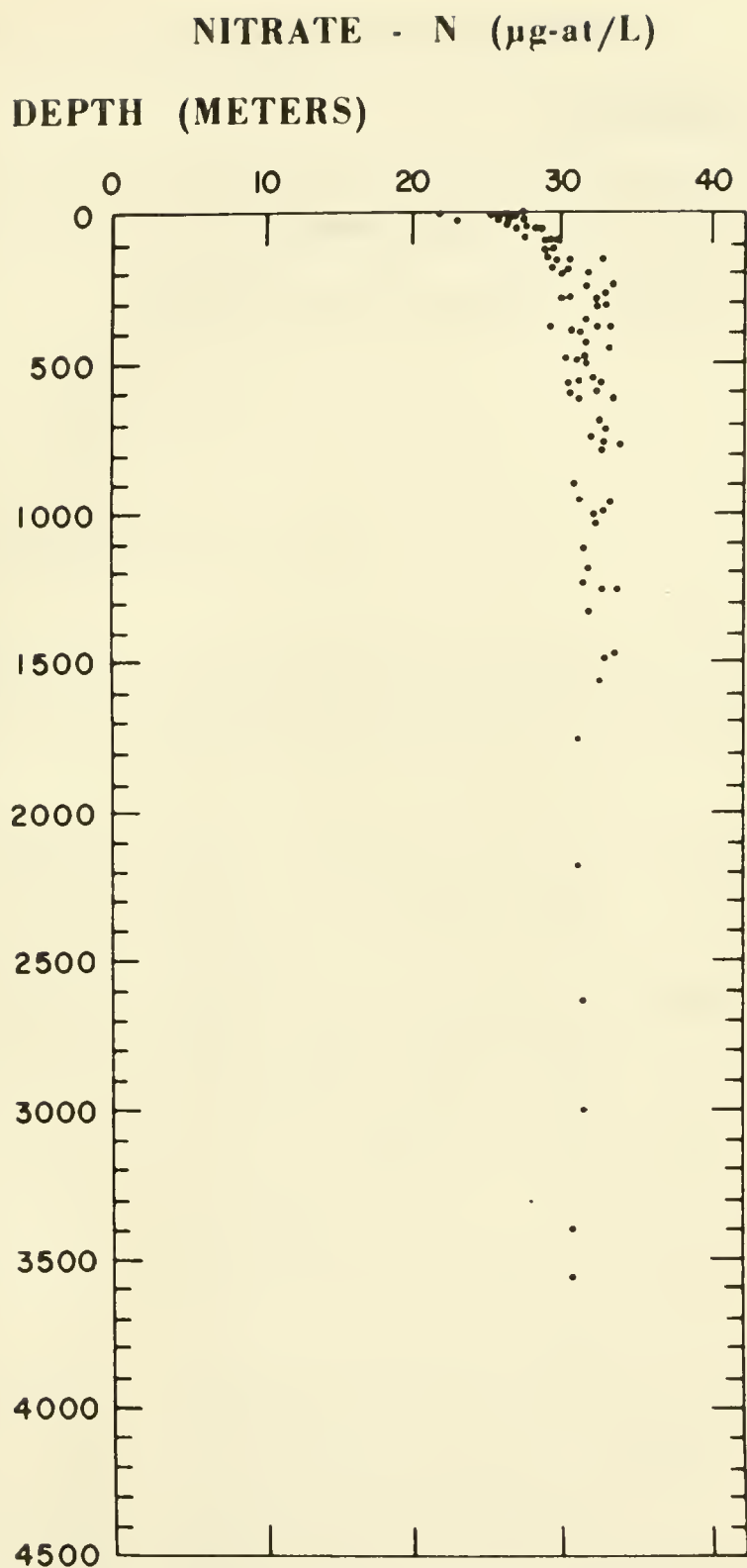


FIGURE 12. Envelope of nitrate ($\mu\text{g-at/l}$) versus depth (m) for all deep stations taken during IWSOE-70, 14 February-21 March 1970.

SILICATE - Si ($\mu\text{g-at/L}$)

DEPTH (METERS)

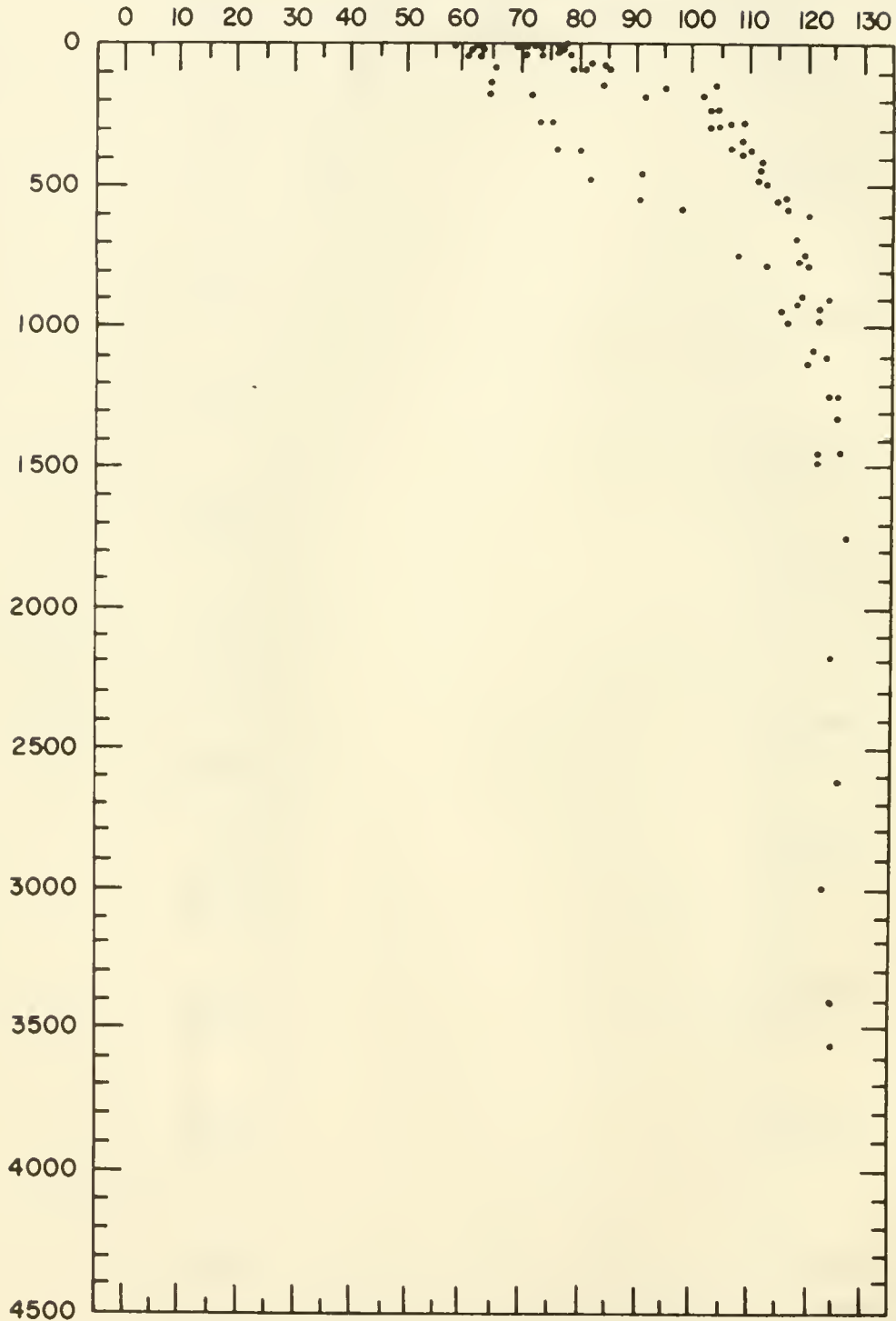


FIGURE 13. Envelope of silicate ($\mu\text{g-at/l}$) versus depth (m) for all deep stations taken during IWSOE-70, 14 February-21 March 1970.

APPENDIX A

OCEANOGRAPHIC DATA

Cruises Listed

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I. CGC GLACIER, January 1970	22
II. CGC GLACIER, February–March 1970	26

Codes Utilized

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M-2, Processing Physical and Chemical Data from Oceanographic Stations. (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

Depth to Bottom	Corrected or uncorrected sounding in meters.
Max. Depth of Samples	Depth of deepest sample to nearest multiple of one hundred meters.
Wave observations	
DIR.	Rounded to nearest multiple of 10 degrees.
HGT.	Increments of $\frac{1}{2}$ m. Sum of 5 meters plus increments of $\frac{1}{2}$ m if 50 is added to direction.
PER.	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or 2X (numeric entry) + 1. For other entries see WMO Code 3155.
SEA	Sea state according to WMO Code 3700
Weather Code	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud Code	
Type	Cloud type according to WMO Code 0500.
Amount	Cloud amount in eighths. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water	
Color Code	Color according to Forel-Ule scale.
Trans.	Transparency in whole meters as determined by Secchi disc.
Wind	
Dir.	Rounded to nearest multiple of 10 degrees.
Speed or Force	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.
Barometer	Barometric pressure given in tens, units, and tenths of millibars.
Air Temp. °C	Air temperature to tenths of a degree centigrade.
Vis. Code	Visibility according to WMO Code 4300.
No. obs. depths	Number of observed levels associated with the station.
Messenger time	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.
Card type	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.

Depth (m)	Depth to nearest meter. A postscript T indicates depth was obtained therometrically; Z indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T °C	Temperature to hundredths of a degree centigrade
S ‰	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.
Specific-volume	Multiply entry by 10^{-7} to obtain specific-volume anomaly in cubic centimeters per gram.
$\Sigma \Delta D$ Dyn. M $\times 10^3$	Multiply entry by 10^{-3} to obtain anomaly of dynamic depth in dynamic meters referenced to the sea surface.
Sound Velocity	Sound velocity according to Wilson's formula entered to tenths of a meter per second.
O ₂ ml/l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO ₄ -P μ g-at/l	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P μ g-at/l	Total phosphous in microgram-atoms per liter entered to hundredths.
NO ₂ -N μ g-at/l	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO ₃ -N μ g-at/l	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO ₄ -Si μ g-at/l	Silicate-silicon in microgram-atoms per liter entered to whole units.
pH	Entered to hundredths.

TABLE I.—CGC GLACIER, January 1970.

REFERENCE		SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	DRIFT INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE (AMT)	
318155	GL		6106 S	05539 W		521	15	01	06	209	1970	001	0045		27	6	4		X4	X	9	0001
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mba)	DRY BULB	WET BULB										
									24	514	893	006	005	3	04							
MESSAGE TIME of HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ O DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ol/l	TOTAL-P μg - ol/l	NO ₂ -N μg - ol/l	NO ₃ -N μg - ol/l	SiO ₄ -Si μg - ol/l	pH	S C					
		STD	0000	-0012	3426	2754	0005559	0000	14477													
209		OBS	0000	-0012	34264	2754			14477													
		STD	0010	-0013	3426	2754	0005575	0005	14478													
209		OBS	0010	-0013	34262	2754			14478													
		STD	0020	-0013	3426	2754	0005564	0011	14480													
209		OBS	0025	-0013	34264	2754			14481													
		STD	0030	-0013	3426	2754	0005545	0016	14482													
209		OBS	0035	-0013	34266	2754			14483													

REFERENCE		SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	DRIFT INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE (AMT)	
318155	GL		64508 S	06410 W		522	44	01	11	000	1970	002	0637		32	1	4		X1	7	7	0002
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mba)	DRY BULB	WET BULB										
									22	504	975	000	-001	7	11							
MESSAGE TIME of HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ O DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ol/l	TOTAL-P μg - ol/l	NO ₂ -N μg - ol/l	NO ₃ -N μg - ol/l	SiO ₄ -Si μg - ol/l	pH	S C					
		STD	0000	-0098	3280	2639	0016446	0000	14417													
000		OBS	0000	-0098	32798	2639			14417													
000		OBS	0009	-0111	32797	2639			14412													
		STD	0010	-0113	3288	2646	0015751	0016	14413													
		STD	0020	-0125	3358	2703	0010364	0029	14419													
000		OBS	0023	-0125	33735	2716			14421													
		STD	0030	-0107	3386	2725	0008246	0038	14433													
000		OBS	0047	-0070	34080	2742			14456													
		STD	0050	-0065	3409	2742	0006671	0053	14459													
000		OBS	0070	-0035	34165	2747			14477													
		STD	0075	-0028	3421	2750	0005923	0069	14482													
000		OBS	0094	-0005	34336	2759			14497													
		STD	0100	-0002	3435	2760	0004970	0082	14500													
		STD	0125	0011	3439	2763	0004710	0094	14510													
000		OBS	0139	0016	3407P	2737P																
		STD	0150	0019	3442	2765	0004478	0106	14518													
000		OBS	0185	0027	34464	2768			14528													
		STD	0200	0028	3447	2768	0004202	0128	14532													
		STD	0250	0037	3449	2770	0004073	0148	14544													
000		OBS	0275	0043	34508	2771			14551													
		STD	0300	0054	3453	2772	0003863	0168	14561													
000		OBS	0360	0074	34586	2775			14580													
		STD	0400	0083	3461	2777	0003454	0205	14591													
000		OBS	T0443	0088	34640	2779			14601													

TABLE I.—Continued.

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPTH INDIC	MARGSON SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER	
CITY CODE	IO. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318155	GL	6114	S	05811	W	521	18	01	17	182	1970	003	0636		16	2	6		X1	8	2	0003	
						WATER		WIND		AIR TEMP. °C													
						COLOR	TRANS.	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
									03	505	976	-010	-021	8	13								
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C						
		STD	0000	0066	3411	2738	0007103	0000	14511														
182		OBS	0000	0066	34115	2738			14511														
		STD	0010	0068	3395	2725	0008341	0007	14511														
182		OBS	0010	0068	33953	2725			14511														
		STD	0020	0049	3405	2733	0007501	0015	14506														
182		OBS	0025	0042	34083	2737			14504														
		STD	0030	0039	3408	2737	0007183	0023	14503														
		STD	0050	0027	3409	2738	0007073	0037	14501														
182		OBS	0051	0026	34090	2738			14501														
		STD	0075	0013	3412	2741	0006743	0054	14499														
182		OBS	0076	0012	34127	2742			14499														
		STD	0100	-0007	3423	2751	0005797	0070	14496														
182		OBS	0102	-0008	34241	2752			14496														
		STD	0125	-0014	3426	2754	0005539	0084	14497														
		STD	0150	-0022	3429	2756	0005298	0097	14498														
182		OBS	0152	-0023	34292	2757			14498														
		STD	0200	-0042	3435	2763	0004702	0122	14498														
182		OBS	0203	-0043	34358	2763			14498														
		STD	0250	-0017	3443	2767	0004251	0145	14519														
182		OBS	0254	-0015	34434	2768			14520														
		STD	0300	-0002	3448	2771	0003915	0165	14534														
182		OBS	0305	-0002	34486	2771			14535														
		STD	0400	-0026	3453	2776	0003387	0202	14541														
182		OBS	0406	-0028	34534	2776			14541														
		STD	0500	-0060	3453	2778	0003163	0235	14542														
182		OBS	0508	-0063	34535	2778			14542														
		STD	0600	-0096	3453	2779	0003017	0265	14542														
182		OBS	T0618	-0102	34523	2779			14542														

REFERENCE CITY CODE	IO. NO.	SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPT INDIC	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
						10"	1"	MO	OAT		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE	
318155	GL	6236	S	05935	W	521	29	01	18	167	1970	004	0546		21	2	2		X2	6	8	0004
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NC. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB									
								21	518	949	010	-004	7	12								
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S CC					
		STD	0000	0037	3409	2737	0007167	0000	14497													
167		OBS	0000	0037	34086	2737			14497													
167		OBS	0009	0038	34091	2737			14499													
		STD	0010	0038	3409	2737	0007130	0007	14499													
		STD	0020	0035	3409	2737	0007148	0014	14500													
167		OBS	0023	0035	34086	2737			14500													
		STD	0030	0035	3407	2736	0007237	0021	14501													
167		OBS	0046	0034	34074	2736			14503													
		STD	0050	0030	3409	2737	0007127	0035	14502													
167		OBS	0069	0011	34139	2743			14497													
		STD	0075	0003	3415	2744	0006471	0052	14495													
167		OBS	0092	-0015	34193	2748			14490													
		STD	0100	-0022	3422	2751	0005856	0068	14489													
		STD	0125	-0038	3428	2756	0005314	0082	14486													
167		OBS	0138	-0043	34300	2758			14486													
		STD	0150	-0043	3431	2759	0005064	0095	14489													
167		OBS	0182	-0042	34332	2761			14494													
		STD	0200	-0039	3435	2762	0004776	0119	14499													
167		OBS	0227	-0030	34378	2764			14508													
		STD	0250	-0014	3442	2767	0004316	0142	14520													
167		OBS	0270	-0003	34455	2769			14529													
		STD	0300	0007	3449	2771	0003914	0163	14539													
167		OBS	0356	0014	34538	2775			14552													
		STD	0400	0010	3456	2777	0003383	0199	14558													
167		OBS	T0438	0000	34572	2778			14560													

TABLE I.—Continued.

REFERENCE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSOEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODE		NDDC STATION NUMBER
					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT		
318155	GL	601255	04615 W	520	06	01	27	212	1970			005		2727		00	0	X		X4	X	9	0005
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
				COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)		DRY BULB	WET BULB												
								32	505	921	017	015	1	16									
MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-20°		Σ Δ D DTN. M. X 10 ³		SOUND VELOCITY	D ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₃ -N μg - at/l	NO ₃ -N μg - at/l	SID ₄ -Si μg - at/l	pH				
		STD	0000	-0034	3334	2681		0012500		0000		14454											
212		OBS	0000	-0034	33344	2681						14454											
		STD	0010	-0034	3335	2682		0012415		0012		14456											
212		OBS	0010	-0034	33354	2682						14456											
		STD	0020	-0073	3339	2686		0012012		0024		14440											
212		OBS	0026	-0091	33431	2690						14433											
		STD	0030	-0095	3350	2696		0011029		0036		14433											
		STD	0050	-0118	3382	2722		0008550		0055		14430											
212		OBS	0052	-0120	33843	2724						14430											
		STD	0075	-0148	3409	2745		0006384		0074		14424											
212		OBS	0077	-0150	34104	2746						14424											
		STD	0100	-0115	3429	2760		0004928		0088		14446											
212		OBS	0103	-0111	34308	2762						14449											
		STD	0125	-0089	3437	2766		0004404		0100		14464											
		STD	0150	-0065	3443	2770		0004036		0110		14480											
		STD	0200	-0027	3452	2775		0003514		0129		14507											
212		OBS	0203	-0025	34524	2776						14508											
		STD	0250	0003	3456	2777		0003348		0146		14530											
		STD	0300	0019	3459	2778		0003233		0163		14546											
212		OBS	0303	0020	34590	2779						14547											
		STD	0400	0012	3460	2780		0003062		0194		14559											
212		OBS	0400	0012	34605	2780						14559											
212		OBS	T0498	0007	34598	2780						14573											
		STD	0500	0007	3460	2780		0003079		0225		14574											
212		OBS	T0591	0011	34613	2781						14591											
		STD	0600	0011	3461	2781		0002982		0255		14592											
		STD	0700	0009	3462	2782		0002895		0285		14608											
212		OBS	0793	0007	34629	2782						14623											
		STD	0800	0007	3463	2782		0002834		0313		14624											
		STD	0900	0006	3463	2782		0002819		0342		14640											
212		OBS	0993	0004	34630	2783						14655											
		STD	1000	0004	3463	2783		0002790		0370		14656											
		STD	1100	-0000	3463	2783		0002728		0397		14671											
212		OBS	1193	-0004	34635	2783						14685											
		STD	1200	-0004	3463	2783		0002684		0424		14686											
		STD	1300	-0008	3463	2784		0002656		0451		14701											
		STD	1400	-0011	3463	2784		0002637		0477		14717											
212		OBS	T1492	-0013	34631	2784						14732											
		STD	1500	-0013	3463	2784		0002618		0504		14733											
		STD	1750	-0018	3463	2783		0002593		0569		14773											
		STD	2000	-0019	3462	2783		0002604		0634		14815											
212		OBS	T2008	-0019	34619	2783						14817											

TABLE I.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
CITY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA	
318155	GL	6012 S	04615 W	520	06	01	28	050	1970		006							X1	0 3		0006
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB										
						DT	SD	36	SQ4		015		7	27							
MESSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	Si O ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH				
		STD	0000	-0024	3342	2686	0011958		0000	14460											
050		OBS	0000	-0024	33420	2686				14460											
		STD	0010	-0024	3342	2686	0011955		0012	14462											
		OBS	0010	-0024	33420	2686				14462											
		STD	0020	-0045	3344	2689	0011688		0023	14454											
007		OBS	0025	-0069	33470	2692				14444											
		STD	0030	-0102	3351	2697	0010974		0035	14430											
		OBS	0030	-0102	33508	2697				14430											
		STD	0050	-0118	3388	2727	0008063		0054	14431											
		OBS	0050	-0118	33880	2727				14431											
		STD	0075	-0159	3420	2754	0005479		0071	14420											
		OBS	0075	-0159	34200	2754				14420											
		OBS	0078	-0162	34220	2756				14420											
		STD	0100	-0142	3441	2771	0003938		0082	14435											
		OBS	0100	-0142	34406	2771				14435											
		STD	0125	-0124	3444	2773	0003725		0092	14448											
		OBS	0125	-0124	34440	2773				14448											
		STD	0150	-0080	3454	2779	0003103		0101	14475											
		OBS	0150	-0080	34543	2779				14475											
		STD	0200	-0046	3458	2781	0002955		0116	14499											
		OBS	0200	-0046	34580	2781				14499											
		STD	0250	0015	3465	2784	0002746		0130	14536											
		OBS	0250	0015	34650	2784				14536											
		STD	0300	0015	3467	2785	0002610		0143	14545											
		OBS	0300	0015	34668	2785				14545											
		OBS	0338	0022	34690	2786				14555											
		OBS	0354	0005	34650	2784				14549											
		OBS	0374	0036	34710	2787				14567											
		STD	0400	0034	3471	2787	0002406		0168	14571											
		OBS	0400	0034	34710	2787				14571											
		OBS	0443	0026	34710	2788				14574											
		OBS	0470	0006	34710	2789				14570											
		STD	0500	-0001	3469	2788	0002299		0192	14571											
		OBS	0500	-0001	34695	2788				14571											
		STD	0600	0021	3472	2789	0002250		0215	14598											
		OBS	0600	0021	34720	2789				14598											
		STD	0700	0011	3472	2789	0002187		0237	14610											
		OBS	0700	0011	34720	2789				14610											
		STD	0800	0010	3473	2790	0002103		0258	14627											
		OBS	0800	0010	34730	2790				14627											
		STD	0900	0002	3472	2790	0002117		0279	14640											
		OBS	0900	0002	34720	2790				14640											
		STD	1000	-0001	3480	2797	0001450		0297	14656											
		OBS	1000	-0001	34805	2797				14656											
		STD	1100	-0007	3480	2797	0001402		0311	14670											
		OBS	1100	-0007	34805	2797				14670											
		STD	1200	-0012	3480	2798	0001354		0325	14685											
		OBS	1200	-0012	34805	2798				14685											

TABLE I.—Continued.

REFERENCE		SNIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRAFT METER	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER					
CTRY CODE	ID. NO.					10'	1"	MO	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DIR					HGT	PER	SEA	TYPE	AMT
318155	GL		5627 S	04507 W	484	65	01	28	175	1970		007		0380		01	1	2		X7	0	3		0007		
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
						COLOR CODE		SPEED OR FORCE			DRY BULB						WET BULB									
						DT	SD	36	S04		915	018					017	7	14							
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ ₁₀ ⁰		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₂ -Si μg - at/l	pH								
		STD	0000	-0007	3342	2686				0012030	0000	14468														
	175	OBS	0000	-0007	3342	2686						14468														
		STD	0010	-0007	3342	2686				0012027	0012	14469														
		OBS	0010	-0007	3342	2686						14469														
		STD	0020	-0069	3353	2697				0010954	0023	14444														
	005	OBS	0025	-0099	3362	2706						14432														
		STD	0030	-0129	3374	2716				0009111	0033	14421														
		OBS	0030	-0129	3374	2716						14421														
		STD	0050	-0149	3412	2748				0006136	0048	14420														
		OBS	0050	-0149	3412	2748						14420														
		STD	0075	-0164	3428	2761				0004847	0062	14419														
		OBS	0075	-0164	3428	2761						14419														
		OBS	0081	-0172	3429	2762						14416														
		STD	0100	-0166	3438	2769				0004066	0073	14424														
		OBS	0100	-0166	3438	2769						14424														
		STD	0125	-0144	3445	2774				0003582	0083	14439														
		OBS	0125	-0144	3445	2774						14439														
		STD	0150	-0099	3455	2781				0002969	0091	14466														
		OBS	0150	-0099	3455	2781						14466														
		STD	0200	-0056	3462	2785				0002608	0105	14495														
		OBS	0200	-0056	3462	2785						14495														
		STD	0250	-0043	3464	2786				0002507	0118	14510														
		OBS	0250	-0043	3464	2786						14510														
		STD	0300	-0039	3465	2786				0002448	0130	14520														
		OBS	0300	-0039	3465	2786						14520														
		OBS	0369	-0033	3466	2787						14534														

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DRAFT FOOT	MARSON SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL.	WAVE OBSERVATIONS			WEA- THER CODE	CLDUD CODES		NDDC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA		TYPE	AMT	
318155	GL	6030 S	04433 W	520	04	01	29	180	1970		008		0600		05	2	4		X4	0	3		0008
						WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. HR.	DIR.	SPEED OR FORCE	DRY BULB	WET BULB												
						DT	SD	11	S13	818	009	009	3	16									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °C	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₄ -Si μg - at/l	pH							
		STD	0000	-0039	3342	2687	0011894	0000	14453														
180		OBS	0000	-0039	33420	2687			14453														
		STD	0010	-0039	3342	2687	0011891	0011	14455														
		OBS	0010	-0039	33420	2687			14455														
		STD	0020	-0087	3349	2694	0011197	0023	14435														
005		OBS	0025	-0103	33620	2706			14430														
		STD	0030	-0114	3382	2722	0008552	0033	14429														
		OBS	0030	-0114	33820	2722			14429														
		STD	0050	-0156	3408	2745	0006414	0048	14416														
		OBS	0050	-0156	34080	2745			14416														
		OBS	0065	-0161	34320	2764			14419														
		STD	0075	-0156	3434	2766	0004371	0061	14424														
		OBS	0075	-0156	34345	2766			14424														
		STD	0100	-0148	3446	2775	0003503	0071	14433														
		OBS	0100	-0148	34460	2775			14433														
		STD	0125	-0122	3446	2774	0003563	0080	14450														
		OBS	0125	-0122	34462	2774			14450														
		STD	0150	-0096	3452	2779	0003177	0088	14467														
		OBS	0150	-0096	34524	2779			14467														
		STD	0200	-0054	3461	2784	0002654	0103	14496														
		OBS	0200	-0054	34615	2784			14496														
		STD	0250	-0037	3466	2787	0002386	0116	14513														
		OBS	0250	-0037	34660	2787			14513														
		STD	0300	-0026	3467	2787	0002360	0127	14526														
		OBS	0300	-0026	34670	2787			14526														
		STD	0400	-0023	3469	2789	0002217	0150	14544														
		OBS	0400	-0023	34690	2789			14544														
		STD	0500	-0021	3469	2789	0002173	0172	14562														
		OBS	0500	-0021	34695	2789			14562														
		OBS	0595	-0020	34710	2790			14579														

TABLE II.—CGC GLACIER, February–March 1970.

REFERENCE	SHIP	LATITUDE	LONGITUDE	MARSSEN	STATION TIME				YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD	NOOC
					10"	1"	MO	DAY		CRUISE	STATION			DIR	HGT	PER		TYPE	
318154	GL	74214S	038182W	555	48	02	19	055	1970	001		0512					X4	03	0001
					WATER		WIND		BARO-		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS				
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)		DRY BULB	WET BULB							
					DT	SD	14	S08	861		+022	+024	6	15					
MESSNGR	CAST	CARD	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME	Δ D	SOUND	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SiO ₄ -Si	PH	S	C	C
TIME	NO.	TYPE					ANOMALY-×10 ³	DYN. M. X 10 ³	VELOCITY		μg - ml/l	μg - ml/l	μg - ml/l	μg - ml/l	μg - ml/l				
HR 1/10																			
		STD	0000	-0176	3397	2736	0007239	0000	14397										
	055	OBS	0000	-0176	3397	2736			14397										
		STD	0010	-0179	3397	2736	0007225	0007	14397										
		OBS	0010	-0179	3397	2736			14397										
		STD	0020	-0179	3403	2741	0006758	0014	14399										
	005	OBS	0025	-0179	3407	2744			14401										
		STD	0030	-0178	3412	2748	0006062	0021	14403										
		OBS	0030	-0178	3412	2748			14403										
		STD	0050	-0181	3430	2763	0004661	0031	14407										
		OBS	0050	-0181	3430	2763			14407										
		STD	0075	-0182	3434	2766	0004336	0043	14411										
		OBS	0075	-0182	3434	2766			14411										
		STD	0100	-0182	3436	2768	0004167	0053	14416										
		OBS	0100	-0182	3436	2768			14416										
		STD	0125	-0180	3437	2769	0004080	0064	14421										
		OBS	0125	-0180	3437	2769			14421										
		STD	0150	-0179	3439	2770	0003915	0074	14426										
		OBS	0150	-0179	3439	2770			14426										
		STD	0200	-0174	3441	2772	0003747	0093	14437										
		OBS	0200	-0174	3441	2772			14437										
		STD	0250	-0162	3444	2774	0003528	0111	14451										
		OBS	0250	-0162	3444	2774			14451										
		STD	0300	-0152	3446	2775	0003385	0128	14465										
		OBS	0300	-0152	3446	2775			14465										
		STD	0371	-0139	3452	2780			14483										
		OBS	0400	-0096	3458	2783	0002665	0158	14509										
		STD	0500	-0063	3463	2786	0002426	0184	14542										
		OBS	0500	-0063	3463	2786			14542										

REFERENCE	SHIP	LATITUDE	LONGITUDE	MARSSEN	STATION TIME				YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD	NOOC
					10"	1"	MO	DAY		CRUISE	STATION			DIR	HGT	PER		TYPE	
318154	GL	74214S	038182W	555	48	02	19	070	1970	001		0512					X4	68	0002
					WATER		WIND		BARO-		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS				
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)		DRY BULB	WET BULB							
								14	S08	861	+022	+024	6	10					
MESSNGR	CAST	CARD	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME	Δ D	SOUND	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SiO ₄ -Si	PH	S	C	C
TIME	NO.	TYPE					ANOMALY-×10 ³	DYN. M. X 10 ³	VELOCITY		μg - ml/l	μg - ml/l	μg - ml/l	μg - ml/l	μg - ml/l				
HR 1/10																			
		STD	0000	-0182	3390	2731	0007748	0000	14393	844									
	070	OBS	0000	-0182	33902	2731			14393	844	127			008	190	050			
		STD	0010	-0181	3387	2728	0008012	0008	14394	867									
	070	OBS	0010	-0181	33867	2728			14394	867	131			008	189	050			
		STD	0020	-0182	3391	2731	0007673	0016	14396	845									
	070	OBS	0025	-0182	33939	2734			14397	833	142			007	210	054			
		STD	0030	-0182	3400	2739	0006975	0023	14399	817									
		STD	0050	-0180	3421	2756	0005354	0035	14406	768									
	070	OBS	0051	-0180	34216	2756			14407	766	189			008	268	062			
		STD	0075	-0181	3427	2761	0004874	0048	14411	763									
		STD	0100	-0183	3431	2764	0004548	0060	14415	760									
	070	OBS	0102	-0183	34316	2764			14415	760	202			005	285	065			
		STD	0125	-0184	3433	2766	0004378	0071	14419	752									
		STD	0150	-0184	3434	2766	0004284	0082	14423	743									
	070	OBS	0152	-0184	34342	2767			14423	742	207			003	295	067			
		STD	0200	-0179	3436	2768	0004114	0103	14434	730									
	070	OBS	0203	-0179	34362	2768			14434		209			000	294	069			
		STD	0250	-0176	3438	2769	0003941	0123	14444	714									
		STD	0300	-0163	3441	2772	0003727	0142	14459	694									
	070	OBS	T0308	-0160	34414	2772			14462	690	211			000	304	072			
		STD	0400	-0105	3450	2777	0003231	0177	14504	642									
	070	OBS	T0403	-0104	34504	2777			14505	640	216			000	303	084			
		STD	0500	-0111	3459	2784	0002483	0206	14519	594									
	070	OBS	T0508	-0114	34592	2785			14519	590	217			000	310	094			

TABLE II.—Continued.

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT	MARS DEN		STATION TIME			YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE				WEA-	CLOUD		NODC
CITY	ID.	CODE			INDIC	SQUARE		MO	DAY	HR./10		CRUISE	STATION	TO	OF	DIR.	HGT	PER	SEA	THER	TYPE	AMT	STATION
CODE	NO.		1/10	1/10		10"	1"					NO.	NUMBER	BOTTOM	S'AMPL'S					CODE			NUMBER
318154	GL		76356S	031450W		555	61	02	21	035	1970		002	0392						X2	0	3	0003
		WATER		WIND		BARO-		AIR TEMP. °C		VIS.		NO. OBS.		SPECIAL									
		COLOR	TRANS.	DIR.	SPEED	METER	DRY	WET	DRY	WET	CODE	CODE	CODE	CODE	CODE								
		CODE	(m)		OR	(mb)	BULB	BULB	BULB	BULB													
		DT	SD	03	516	903	-036	-044	7	15													
MESSAGE	CAST	CARD	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME	Σ Δ θ	SOUND	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SiO ₄ -Si	pH	S						
TIME	NO.	TYPE					ANOMALY-10 ³	DYN. M.	VELOCITY		μg - dl/l	μg - dl/l	μg - dl/l	μg - dl/l	μg - dl/l		C						
HR 1/10								X 10 ³															
		STD	0000	-0184	3399	2738	0007067	0000	14393														
035		OBS	0000	-0184	3399	2738			14393														
		STD	0010	-0184	3399	2738	0007060	0007	14395														
		OBS	0010	-0184	3399	2738			14395														
		STD	0020	-0184	3399	2738	0007053	0014	14396														
005		OBS	0025	-0184	3399	2738			14397														
		STD	0030	-0184	3399	2738	0007047	0021	14398														
		OBS	0030	-0184	3399	2738			14398														
		OBS	0032	-0184	3399	2738			14398														
		OBS	0037	-0176	3425	2759			14407														
		STD	0050	-0179	3428	2761	0004819	0033	14408														
		OBS	0050	-0179	3428	2761			14408														
		STD	0075	-0183	3429	2762	0004717	0045	14410														
		OBS	0075	-0183	3429	2762			14410														
		STD	0100	-0184	3430	2763	0004622	0057	14414														
		OBS	0100	-0184	3430	2763			14414														
		STD	0125	-0184	3430	2763	0004606	0068	14418														
		OBS	0125	-0184	3430	2763			14418														
		STD	0150	-0184	3431	2764	0004514	0080	14423														
		OBS	0150	-0184	3431	2764			14423														
		STD	0200	-0184	3432	2765	0004406	0102	14431														
		OBS	0200	-0184	3432	2765			14431														
		STD	0250	-0183	3433	2766	0004302	0124	14440														
		OBS	0250	-0183	3433	2766			14440														
		STD	0300	-0181	3435	2767	0004125	0145	14449														
		OBS	0300	-0181	3435	2767			14449														
		OBS	0390	-0181	3439	2770			14465														

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CITY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
318154	GL		76504S	032300W		555	62	02	21	075	1970		003	0310					X2	0	3	0004
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB										
						DT	SD	06	512	905	-028	-034	7	15								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \theta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C					
		STD	0000	-0182	3395	2735		0007379	0000	14394												
075		OBS	0000	-0182	3395	2735				14394												
		STD	0010	-0182	3395	2735		0007372	0007	14395												
		OBS	0010	-0182	3395	2735				14395												
		STD	0020	-0181	3396	2736		0007290	0015	14397												
005		OBS	0025	-0181	3397	2736				14398												
		STD	0030	-0179	3398	2737		0007135	0022	14400												
		OBS	0030	-0179	3398	2737				14400												
		STD	0050	-0174	3401	2739		0006904	0036	14406												
		OBS	0050	-0174	3401	2739				14406												
		STD	0075	-0143	3410	2746		0006284	0052	14426												
		OBS	0075	-0143	3410	2746				14426												
		STD	0100	-0139	3413	2748		0006053	0068	14433												
		OBS	0100	-0139	3413	2748				14433												
		OBS	0112	-0145	3423	2756				14434												
		OBS	0116	-0133	3419	2753				14439												
		STD	0125	-0135	3422	2755		0005365	0082	14440												
		OBS	0125	-0135	3422	2755				14440												
		STD	0150	-0138	3423	2756		0005266	0095	14443												
		OBS	0150	-0138	3423	2756				14443												
		OBS	0192	-0153	3428	2761				14444												
		STD	0200	-0170	3429	2762		0004677	0120	14437												
		OBS	0200	-0170	3429	2762				14437												
		STD	0250	-0174	3433	2765		0004330	0143	14444												
		OBS	0250	-0174	3433	2765				14444												
		OBS	0291	-0179	3435	2767				14449												

TABLE II.—Continued.

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRAFT FOOT	MARS SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CRUISE CODE	IO. NO.	CODE	* 1/10	* 1/10		10"	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
318154	GL	76551S	032475W	555	62	02	21	137	1970		004	0340							X2	03		0005
			WATER		WIND			BARO- METER (mb)	AIR TEMP. °C		VIS CODE	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS									
		COLOR	TRANS.	DIR.	SPEED OR FORCE	DRY BULB	WET BULB															
		DT	SD	03	S05	911	-025	-027	7	17												
MESSENGER TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - ml/l$	TOTAL-P $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	NO ₃ -N $\mu g - ml/l$	SiO ₄ -Si $\mu g - ml/l$	pH	S CODE					
137		STO	0000	-0154	3394	2733	0007523	0000	14407													
		OBS	0000	-0154	3394	2733			14407													
005		STO	0010	-0154	3394	2733	0007517	0008	14408													
		OBS	0010	-0154	3394	2733			14408													
		STO	0020	-0137	3395	2733	0007504	0015	14418													
		OBS	0025	-0134	3395	2733			14420													
		STO	0030	-0135	3395	2733	0007482	0023	14421													
		OBS	0030	-0135	3395	2733			14421													
		STO	0050	-0139	3396	2734	0007382	0037	14422													
		OBS	0050	-0139	3396	2734			14422													
		OBS	0054	-0137	3396	2734			14424													
		OBS	0073	-0139	3398	2736			14426													
		STO	0075	-0151	3398	2736	0007180	0056	14421													
		OBS	0075	-0151	3398	2736			14421													
		OBS	0091	-0140	3400	2738			14429													
		STO	0100	-0144	3401	2739	0006957	0073	14429													
		OBS	0100	-0144	3401	2739			14429													
		OBS	0107	-0157	3402	2740			14424													
	STO	0125	-0137	3410	2746	0006276	0090	14438														
	OBS	0133	-0134	3413	2748			14441														
	STO	0150	-0139	3418	2752	0005645	0105	14442														
	OBS	0150	-0139	3418	2752			14442														
	STO	0200	-0159	3423	2757	0005170	0132	14442														
	OBS	0206	-0159	3423	2757			14442														
	STO	0250	-0165	3425	2759	0004970	0157	14447														
	OBS	0250	-0165	3425	2759			14447														
	STO	0300	-0172	3429	2762	0004612	0181	14453														
	OBS	0300	-0172	3429	2762			14453														
	OBS	0335	-0182	3433	2766			14455														

REFERENCE CITY CODE	ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	TIME ZONE	MARS DEN SQUARE		STATION TIME IGMT			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318154		GL	77265S	036017W		555	76	03	01	232	1970		005	0937					X7	03		0006	
						WATER		WIND		AIR TEMP. °C													
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)		DRY BULB		WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						DT	SD	02	S06	925	-058		7	17									
MESSENGER TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PD ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S CODE						
232		STD	0000	-0173	3394	2734	0007476	0000	14398														
		OBS	0000	-0173	3394	2734			14398														
006		STD	0010	-0173	3394	2734	0007470	0007	14399														
		OBS	0010	-0173	3394	2734			14399														
		STD	0020	-0180	3399	2738	0007063	0015	14398														
		OBS	0025	-0182	3400	2739			14398														
		STD	0030	-0182	3400	2739	0006974	0022	14399														
		OBS	0030	-0182	3400	2739			14399														
		STD	0050	-0181	3404	2742	0006656	0035	14404														
		OBS	0050	-0181	3404	2742			14404														
		STD	0075	-0177	3412	2748	0006036	0051	14411														
		OBS	0075	-0177	3412	2748			14411														
		STD	0100	-0180	3420	2755	0005399	0066	14415														
		OBS	0100	-0180	3420	2755			14415														
		OBS	0107	-0157	3430	2762			14428														
		STD	0125	-0160	3423	2757	0005210	0079	14429														
		OBS	0125	-0160	3423	2757			14429														
		STD	0150	-0180	3428	2761	0004755	0091	14424														
	OBS	0150	-0180	3428	2761			14424															
	STD	0200	-0183	3432	2765	0004409	0114	14431															
	OBS	0200	-0183	3432	2765			14431															
	STD	0250	-0186	3434	2766	0004216	0136	14439															
	OBS	0250	-0186	3434	2766			14439															
	STD	0300	-0190	3440	2771	0003715	0156	14446															
	OBS	0300	-0190	3440	2771			14446															
	OBS	0339	-0200	3446	2777			14449															
	STD	0400	-0192	3452	2781	0002731	0188	14463															
	OBS	0400	-0192	3452	2781			14463															
	OBS	0467	-0199	3458	2786			14472															
	STD	0500	-0211	3461	2789	0001918	0211	14472															
	OBS	0506	-0214	3462	2790			14472															

TABLE II.—Continued.

REFERENCE	SHIP	LATITUDE	LONGITUDE	DEPTH	MARSOEN	STATION TIME				YEAR	ORIGINATOR'S		DEPTH	MAT.	WAVE				WEA-	CLOUD	NOOC			
CTRY	NO.	CODE	" 1/10	" 1/10	SQ	10'	1"	MO	DAY	HR.1/10		CRUISE	STATION	TO	DEPTH	DIR.	HGT	PER	SEA	TH	TYPE	STATION		
CODE												NO.	NUMBER	BOTTOM	OF					CODE	AWT	NUMBER		
318154	GL	77265S	036017W	555	76	03	02	027	1970			005		0918						X2	6	8	0007	
						WATER		WIND		BARO-		AIR TEMP. °C												
						COLOR	TRANS.	DIR.	SPEED		METER	DRY	WET	VIS.	NO.	SPECIAL								
						CODE	(m)		OF	(mbs)	BULB	BULB		CODE	OBS.	OBSERVATIONS								
								04	S09	899	-067		6	14										
MESSAGE	CAS	CARD	DEPTH	T	S	SIGMA-T		SPECIFIC VOLUME		Σ Δ σ		SOUND		O ₂	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SiO ₄ -Si	pH	CC			
TIME OF	NO.	TYPE	(m)	°C	‰			ANOMALY-σ _t		× 10 ³		VELOCITY		ml/l	μg - dl/l	μg - dl/l	μg - dl/l	μg - dl/l	μg - dl/l					
HR 1/10																								
		STD	0000	-0182	3399	2738		0007041		0000		14394		802										
027		OBS	0000	-0182	33994	2738						14394		802	131			013	195	044				
		STD	0010	-0185	3400	2738		0007020		0007		14394		819										
027		OBS	0016	-0186	33995	2738						14395		827	136			012	196	045				
		STD	0020	-0185	3400	2739		0006974		0014		14396		831										
		STD	0030	-0184	3401	2740		0006893		0021		14398		837										
027		OBS	0042	-0183	34025	2741						14401		840	137			012	208	047				
		STD	0050	-0183	3405	2743		0006575		0034		14403		835										
027		OBS	0068	-0183	34094	2746						14406		826	162			011	229	051				
		STD	0075	-0183	3411	2748		0006099		0050		14408		825										
027		OBS	T0096	-0181	34146	2751						14413		816	174			010	234	055				
		STD	0100	-0180	3416	2752		0005706		0065		14414		809										
		STD	0125	-0174	3422	2756		0005246		0079		14422		775										
027		OBS	0146	-0173	34265	2760						14426		757	196			012	261	062				
		STD	0150	-0174	3427	2760		0004848		0091		14427		757										
027		OBS	T0198	-0183	34306	2764						14431		753	200			009	275	061				
		STD	0200	-0183	3431	2764		0004486		0115		14431		753										
		STD	0250	-0187	3434	2766		0004213		0136		14438		746										
		STD	0300	-0190	3438	2770		0003867		0157		14446		739										
027		OBS	T0300	-0190	34380	2770						14446		739	203			016	290	064				
		STD	0400	-0193	3450	2780		0002880		0190		14463		723										
027		OBS	0413	-0195	34514	2781						14464		721	209			000	286	067				
		STD	0500	-0212	3459	2787		0002067		0215		14472		712										
027		OBS	T0510	-0214	34596	2788						14472		711	213			001	294	070				
		STD	0600	-0224	3465	2792		0001519		0233		14483		709										
027		OBS	T0602	-0224	34649	2792						14484		709	214			002	297	073				
		STD	0700	-0219	3466	2793		0001382		0248		14503		710										
027		OBS	0710	-0218	34666	2794						14505		710	216			001	309	072				
		STD	0800	-0218	3467	2794		0001244		0261		14520		703										
027		OBS	T0812	-0218	34675	2794						14522		702	215			005	294	071				
		STD	0900	-0218	3468	2795		0001120		0272		14537		701										
027		OBS	T0913	-0218	34678	2795						14539		701	215			001	296	073				

REFERENCE	SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	DEPTH METER	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NOOC STATION NUMBER	
					10'	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318154	GL	77346S	035399W	555	75	03	03	073	1970		006		0585					X7	4	8	0008	
					WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
					COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mba)		DRY BULB	WET BULB	VIS. CODE									
							00	S00	930	-056	-057	6	12									
MESSAGE TIME HR 1/10	CAS. NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	CC			
		STD	0000	-0165	3395	2735		0007395		0000	14402	798										
073		OBS	0000	-0165	33953	2735					14402	798	136			011	195	046				
		STD	0010	-0173	3397	2736		0007239		0007	14400	799				010	196	047				
073		OBS	0014	-0175	33975	2737					14400	800	140									
		STD	0020	-0175	3398	2737		0007174		0015	14401	801										
073		OBS	0029	-0175	33980	2737					14402	802	145			011	200	048				
		STD	0030	-0175	3398	2737		0007145		0022	14402	801										
		STD	0050	-0173	3399	2737		0007090		0036	14406	792										
073		OBS	0054	-0173	33987	2737					14407	791	147			010	222	049				
		STD	0075	-0169	3401	2739		0006901		0053	14413	792										
073		OBS	0079	-0168	34020	2740					14414	792	155			009	216	051				
		STD	0100	-0157	3407	2744		0006458		0070	14424	810										
073		OBS	0104	-0156	34075	2744					14425	811	166			009	219	053				
		STD	0125	-0156	3410	2746		0006216		0086	14428	793										
		STD	0150	-0157	3413	2749		0005970		0101	14433	777										
073		OBS	0154	-0157	34131	2749					14433	775	181			008	243	058				
		STD	0200	-0173	3419	2754		0005433		0130	14434	765										
073		OBS	T0203	-0174	34198	2755					14434	764	191			009	284	061				
		STD	0250	-0178	3424	2758		0004990		0156	14441	752										
		STD	0300	-0182	3429	2762		0004596		0180	14448	739										
073		OBS	T0301	-0182	34289	2762					14448	739	201			010	284	062				
		STD	0400	-0209	3444	2775		0003286		0219	14454	728										
073		OBS	T0404	-0210	34442	2775					14454	727	207			012	287	067				
		STD	0500	-0218	3465	2792		0001590		0243	14470	707										
073		OBS	T0511	-0219	34656	2793					14471	706	216			000	299	072				
073		OBS	T0564	-0222	34655	2793					14478	701	216			005	322	072				

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSOEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	IO. NO.						10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
318154	GL	77346S	035399W	555	75	03 03	087	1970	006	0585							X7	03		0009	
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH'S	SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS. MM	DIR.	SPEED OR FORCE	DRY BULB	WET BULB														
		DT	SD	00	500	930	+056	+057	6					14							
MESSENGR TIME OF HR 1/10	CAST NO.	CARO TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - 01/l$	TOTAL-P $\mu g - 01/l$	NO ₂ -N $\mu g - 01/l$	NO ₃ -N $\mu g - 01/l$	SiO ₄ -Si $\mu g - 01/l$	pH	CO ₂				
087		STD	0000	-0172	3390	2730	0007786	0000	14398												
		OBS	0000	-0172	3390	2730			14398												
		STD	0010	-0172	3390	2730	0007779	0008	14399												
005		OBS	0010	-0172	3390	2730			14399												
		STD	0020	-0172	3396	2735	0007312	0015	14402												
		OBS	0025	-0172	3398	2737			14403												
		STD	0030	-0171	3400	2738	0007001		14404												
		OBS	0030	-0171	3400	2738			14404												
		STD	0050	-0170	3402	2740	0006837	0036	14408												
		OBS	0050	-0170	3402	2740			14408												
		STD	0075	-0159	3408	2745	0006391	0053	14419												
		OBS	0075	-0159	3408	2745			14419												
		STD	0100	-0158	3410	2746	0006226	0069	14424												
		OBS	0100	-0158	3410	2746			14424												
		STD	0125	-0157	3415	2750	0005831	0084	14429												
		OBS	0125	-0157	3415	2750			14429												
		STD	0150	-0158	3416	2751	0005737	0098	14433												
		OBS	0150	-0158	3416	2751			14433												
		STD	0200	-0162	3423	2757	0005161	0125	14440												
		OBS	0200	-0162	3423	2757			14440												
	STD	0250	-0179	3430	2763	0004543	0150	14441													
	OBS	0250	-0179	3430	2763			14441													
	STD	0300	-0184	3433	2766	0004268	0172	14448													
	OBS	0300	-0184	3433	2766			14448													
	OBS	0347	-0189	3436	2768			14454													
	OBS	0387	-0209	3456	2785			14454													

TABLE II.—Continued.

REFERENCE CST CODE	SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	DRIFT INDIC	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
					10'	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
318154	GL	76246S	030362W		555	60	03	06	211	1970		008	0350						X7	8	6		0011
					WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
					COLOR CODE	TRANS. mm	DIR.	SPEED OF FORCE	mmbs	mmbs	DRY BULB	WET BULB											
							03	527	853		-089		5	08									

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	$\frac{1}{2}$ C
		STD	0000	-0183	3403	2742	0006731	0000	14394	775							
	211	OBS	0000	-0183	34034	2742			14394	775	144				019	202	048
		STD	0010	-0183	3404	2742	0006679	0007	14396	785							
		STD	0020	-0182	3405	2743	0006620	0013	14398	791							
	211	OBS	0025	-0182	34050	2743			14399	793	153				026	205	050
		STD	0030	-0181	3406	2744	0006516	0020	14401	788							
		STD	0050	-0180	3408	2745	0006352	0033	14405	772							
		STD	0075	-0179	3412	2748	0006046	0048	14410	758							
	211	OBS	0075	-0179	34118	2748			14410	758	183				021	243	056
		STD	0100	-0181	3416	2752	0005703	0063	14414	754							
		STD	0125	-0182	3420	2755	0005355	0077	14418	748							
	211	OBS	0125	-0182	34203	2755			14418	748	197				018	282	060
		STD	0150	-0184	3425	2759	0004974	0090	14422	738							
	211	OBS	T0175	-0185	34284	2762			14426	732	211				026	284	062
		STD	0200	-0185	3429	2762	0004634	0114	14430	732							
	211	OBS	T0225	-0184	34294	2763			14435	731	211				016	293	062
		STD	0250	-0183	3430	2763	0004517	0137	14440	730							
		STD	0300	-0180	3432	2764	0004379	0159	14449	727							
	211	OBS	T0325	-0179	34325	2765			14454	725	216				015	297	065
	211	OBS	T0348	-0180	34349	2767			14458	714	215				018	312	067

REFERENCE		SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	DRIFT INDIC	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CRUY CODE	TO. NO.					10'	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318154	GL	75255S	026285W	554	56	03	07	223	1970		009	0245							X2	0	3		0012
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. mm	DIR.	SPEED OF FORCE	mmbs	mmbs	DRY BULB	WET BULB										
						DT	SD	07	534	.936		-117		7	11								

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	$\frac{1}{2}$ C
		STD	0000	-0183	3392	2732	0007607	0000	14393								
	223	OBS	0000	-0183	3392	2732			14393								
		STD	0010	-0183	3392	2732	0007600	0008	14394								
		OBS	0010	-0183	3392	2732			14394								
		STD	0020	-0181	3408	2745	0006369	0015	14399								
	005	OBS	0025	-0180	3412	2748			14401								
		STD	0030	-0182	3413	2749	0005976	0021	14401								
		OBS	0030	-0182	3413	2749			14401								
		STD	0050	-0194	3422	2757	0005244	0032	14400								
		OBS	0050	-0194	3422	2757			14400								
		STD	0075	-0195	3423	2758	0005148	0045	14404								
		OBS	0075	-0195	3423	2758			14404								
		STD	0100	-0195	3423	2758	0005131	0058	14408								
		OBS	0100	-0195	3423	2758			14408								
		STD	0125	-0195	3425	2759	0004961	0070	14412								
		OBS	0125	-0195	3425	2759			14412								
		STD	0150	-0195	3426	2760	0004868	0083	14417								
		OBS	0150	-0195	3426	2760			14417								
		STD	0200	-0196	3430	2763	0004526	0106	14425								
		OBS	0200	-0196	3430	2763			14425								
		OBS	0241	-0196	3437	2769			14433								

TABLE II.—Continued.

REFERENCE	SNIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INDICATOR	MARSDEN SQUARE	STATION TIME (GMT)					YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.				10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
318154	GL	75255S	026285W		554	56	03	08	053	1970		010		0240					X7	X	9		0013
					WATER		WIND		AIR TEMP. °C				NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mbars)	DRY BULB	WET BULB	VIS. CODE											
								07	532	956	-144		3	08									
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ σ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - σt/l	TOTAL-P μg - σt/l	NO ₃ -N μg - σt/l	NO ₂ -N μg - σt/l	SiO ₂ -Si μg - σt/l	pH	S CODE						
		STD	0000	-0185	3392	2732	0007641	0000	14392	815													
	053	OBS	0000	-0185	33915	2732			14392	815	127		009	181	049								
		STD	0010	-0183	3400	2739	0006963	0007	14395	788													
	053	OBS	0010	-0183	34003	2739			14395	788	157		007	214	054								
		STD	0020	-0185	3408	2745	0006360	0014	14397	767													
	053	OBS	0026	-0186	34114	2748			14398	759	185		005	249	060								
		STD	0030	-0187	3412	2748	0006058	0020	14399	759													
		STD	0050	-0190	3414	2750	0005883	0032	14401	759													
	053	OBS	0051	-0190	34139	2750			14401	759	188		004	266	061								
		STD	0075	-0192	3416	2752	0005716	0047	14404	756													
		STD	0100	-0194	3418	2753	0005549	0061	14408	752													
	053	OBS	0102	-0194	34178	2753			14408	752	199		005	252	061								
		STD	0125	-0195	3419	2755	0005406	0074	14412	748													
		STD	0150	-0196	3421	2756	0005265	0088	14415	744													
	053	OBS	T0154	-0196	34210	2756			14416	743	205		006	261	064								
		STD	0200	-0196	3423	2758	0005062	0114	14424	744													
	053	OBS	T0203	-0196	34238	2758			14425	744	207		002	278	065								
	053	OBS	T0237	-0196	34298	2763			14431	727	212		003	302	067								

REFERENCE	SHIP ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318154	GL		75255S	026285W		554	56	03	08	110	1970		011		0235					X3	0 3		0014
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbars)	DRY BULB	WET BULB											
						DT	SD	07	S30	981	-136		6					11					
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - \text{dl/l}$	TOTAL-P $\mu g - \text{dl/l}$	NO ₃ -N $\mu g - \text{dl/l}$	NO ₂ -N $\mu g - \text{dl/l}$	SiO ₄ -Si $\mu g - \text{dl/l}$	pH	S CODE						
		STD	0000	-0182	3387	2728	0007994	0000	14392														
	110	OBS	0000	-0182	3387	2728			14392														
		STD	0010	-0182	3388	2729	0007910	0008	14394														
		OBS	0010	-0182	3388	2729			14394														
		STD	0020	-0183	3404	2742	0006671	0015	14397														
	005	OBS	0025	-0184	3408	2745			14399														
		STD	0030	-0189	3409	2746	0006267	0022	14397														
		OBS	0030	-0189	3409	2746			14397														
		STD	0050	-0193	3418	2754	0005553	0034	14400														
		OBS	0050	-0193	3418	2754			14400														
		STD	0075	-0194	3420	2755	0005381	0047	14404														
		OBS	0075	-0194	3420	2755			14404														
		STD	0100	-0195	3421	2756	0005285	0061	14408														
		OBS	0100	-0195	3421	2756			14408														
		STD	0125	-0195	3422	2757	0005191	0074	14412														
		OBS	0125	-0195	3422	2757			14412														
		STD	0150	-0196	3424	2759	0005019	0086	14416														
		OBS	0150	-0196	3424	2759			14416														
		STD	0200	-0197	3428	2762	0004676	0111	14424														
		OBS	0200	-0197	3428	2762			14424														
		OBS	0229	-0196	3434	2767			14430														

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10°	1°	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA	
318154	GL	75255S	026285W	554	56	03	08	174	1970		012		0235					X2	6	8	0015
						WATER		WIND		AIR TEMP. °C		BARO- METER		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS			
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB										
								09	S26	988	-112		7	08							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t °		Σ Δ σ OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S CC		
		STD	0000	-0184	3388	2729		0007905		0000	14392	817									
174		OBS	0000	-0184	33881	2729					14392	817	122		010	182	054				
		STD	0010	-0185	3401	2740		0006904		0007	14395	788									
174		OBS	0010	-0185	34010	2740					14395	788	158		009	200	067				
		STD	0020	-0187	3411	2748		0006125		0014	14397	773									
174		OBS	0025	-0188	34140	2750					14397	768	190		005	248	063				
		STD	0030	-0189	3415	2751		0005806		0020	14398	768									
		STD	0050	-0192	3417	2753		0005656		0031	14400	766									
174		OBS	0050	-0192	34167	2753					14400	766	193		006	238	079				
		STD	0075	-0192	3417	2753		0005600		0045	14404	762									
		STD	0100	-0193	3418	2753		0005535		0059	14408	758									
174		OBS	0100	-0193																	
		STD	0125	-0194	3418	2754		0005477		0073	14412	754									
		STD	0150	-0196	3419	2754		0005418		0087	14415	750									
174		OBS	T0154	-0196	34189	2754					14416	749	200		004	261	084				
		STD	0200	-0195	3421	2756		0005217		0113	14424	745									
174		OBS	T0203	-0195	34211	2756					14425	745	197		002	265	095				
174		OBS	0234	-0198	34283	2762					14429	739	206		004	273	098				

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10°	1°	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA	
318154	GL	75255S	026285W	554	56	03	08	232	1970		013		0235					X1	0	3	0016
						WATER		WIND		AIR TEMP. °C		BARO- METER		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS			
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB										
						DT	SD	07	S26	996	-117		7	12							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t °		Σ Δ σ OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S CC		
		STD	0000	-0179	3384	2726		0008231		0000	14393										
		OBS	0000	-0179	3384	2726					14393										
		STD	0010	-0179	3384	2726		0008224		0008	14395										
		OBS	0010	-0179	3384	2726					14395										
		STD	0020	-0183	3400	2739		0006979		0016	14397										
005		OBS	0025	-0184	3406	2744					14398										
		STD	0030	-0184	3410	2747		0006202		0022	14400										
		OBS	0030	-0184	3410	2747					14400										
		STD	0050	-0194	3418	2754		0005551		0034	14399										
		OBS	0050	-0194	3418	2754					14399										
		STD	0075	-0194	3420	2755		0005381		0048	14404										
		OBS	0075	-0194	3420	2755					14404										
		STD	0100	-0195	3420	2755		0005362		0061	14407										
		OBS	0100	-0195	3420	2755					14407										
		STD	0125	-0196	3422	2757		0005189		0074	14411										
		OBS	0125	-0196	3422	2757					14411										
		STD	0150	-0189	3423	2758		0005113		0087	14419										
		OBS	0150	-0189	3423	2758					14419										
		STD	0183	-0196	3428	2762					14422										
		OBS	0200	-0196	3431	2764		0004449		0111	14425										
		STD	0200	-0196	3431	2764					14425										
		OBS	0233	-0195	3435	2767					14432										

REFERENCE		SHIP CODE	LATITUDE * 1°/10	LONGITUDE * 1°/10	DRIFT INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CRUISE CODE	ID. NO.					10°	1°	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT	PER		SEA	TYPE	
318154	GL	75255S	026285W	554	56	03	08	232	1970		013	0235							X1	0	3	0016
						WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbars)	DRY BULB	WET BULB										
						DT	SD	07	S26	996	-117	7	12									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \sigma$ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S CODE			
232		STD	0000	-0179	3384	2726		0008231		0000	14393											
		OBS	0000	-0179	3384	2726					14393											
		STD	0010	-0179	3384	2726		0008224		0008	14395											
005		OBS	0010	-0179	3384	2726					14395											
		STD	0020	-0183	3400	2739		0006979		0016	14397											
		OBS	0025	-0184	3406	2744					14398											
		STD	0030	-0184	3410	2747		0006202		0022	14400											
		OBS	0030	-0184	3410	2747					14400											
		STD	0050	-0194	3418	2754		0005551		0034	14399											
		OBS	0050	-0194	3418	2754					14399											
		STD	0075	-0194	3420	2755		0005381		0048	14404											
		OBS	0075	-0194	3420	2755					14404											
		STD	0100	-0195	3420	2755		0005362		0061	14407											
		OBS	0100	-0195	3420	2755					14407											
		STD	0125	-0196	3422	2757		0005189		0074	14411											
		OBS	0125	-0196	3422	2757					14411											
		STD	0150	-0189	3423	2758		0005113		0087	14419											
		OBS	0150	-0189	3423	2758					14419											
	OBS	0183	-0196	3428	2762					14422												
	STD	0200	-0196	3431	2764		0004449		0111	14425												
	OBS	0200	-0196	3431	2764					14425												
	OBS	0233	-0195	3435	2767					14432												

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	DEPTH MDCN	MARS DEN SQUARE	STATION TIME IGMT			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	ID. NO.						10"	1"	MO DAY HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	NGT	PER		SEA	TYPE	
318154	GL	75255S	026285W	554	56	03	09	055	1970		014		0235					X3	X	4	0017
		WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB																
				07	521	987	153		7	08											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot ml/l$	TOTAL-P $\mu g \cdot ml/l$	NO ₂ -N $\mu g \cdot ml/l$	NO ₃ -N $\mu g \cdot ml/l$	SiO ₄ -Si $\mu g \cdot ml/l$	pH	S CC				
		STD	0000	-0187	3394	2734	0007483	0000	14391	817											
	055	OBS	0000	-0187	33935	2734			14391	817	134		010	197	053						
		STD	0010	-0187	3399	2738	0007092	0007	14393	776											
	055	OBS	0010	-0187	33985	2738			14393	776	159		010	217	057						
		STD	0020	-0187	3410	2747	0006202	0014	14397	771											
	055	OBS	0025	-0188	34136	2750			14397	768	185		028	220	061						
		STD	0030	-0190	3415	2751	0005804	0020	14398	763											
		STD	0050	-0194	3417	2753	0005605	0031	14399	751											
	055	OBS	0050	-0194	34173	2753			14399	751	195		014	247	063						
		STD	0075	-0194	3418	2754	0005535	0045	14404	760											
		STD	0100	-0193	3418	2754	0005512	0059	14408	762											
	055	OBS	0100	-0193	34181	2754			14408	762	201		007	250	062						
		STD	0125	-0193	3418	2754	0005480	0073	14412	749											
		STD	0150	-0193	3418	2754	0005456	0086	14416	742											
	055	OBS	0150	-0193	34184	2754			14416	742	197		010	251	063						
		STD	0200	-0196	3419	2755	0005361	0114	14423	744											
	055	OBS	0200	-0196	34191	2755			14423	744	199		027	238	063						
	055	OBS	0230	-0195	34201	2755			14429	739	204		013	252	063						

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	DEPTH MDCN	MARSSEN SQUARE	STATION TIME IGMT				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	ID. NO.						10"	1"	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR.	NGT	PER		SEA	TYPE	
318154	GL	75255S	026285W	554	56	03	09	110	1970		015		0235						X1	0	3		0018
		WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB																		
				07	50	9	516	965	133		7	11											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S CC						
		STD	0000	-0185	3376	2719	0008833	0000	14389														
	110	OBS	0000	-0185	3376	2719			14389														
		STD	0010	-0185	3376	2719	0008826	0009	14391														
		OBS	0010	-0185	3376	2719			14391														
		STD	0020	-0186	3403	2741	0006741	0017	14396														
	005	OBS	0025	-0187	3409	2746			14397														
		STD	0030	-0187	3409	2746	0006272	0023	14398														
		OBS	0030	-0187	3409	2746			14398														
		STD	0050	-0192	3414	2750	0005863	0035	14400														
		OBS	0050	-0192	3414	2750			14400														
		STD	0075	-0194	3416	2752	0005688	0050	14403														
		OBS	0075	-0194	3416	2752			14403														
		STD	0100	-0195	3416	2752	0005668	0064	14407														
		OBS	0100	-0195	3416	2752			14407														
		STD	0125	-0195	3417	2753	0005575	0078	14411														
		OBS	0125	-0195	3417	2753			14411														
		STD	0150	-0196	3418	2754	0005479	0092	14415														
		OBS	0150	-0196	3418	2754			14415														
		STD	0200	-0197	3426	2760	0004830	0118	14424														
		OBS	0200	-0197	3426	2760			14424														
		OBS	0233	-0196	3431	2764			14431														

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH IN METERS	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLE'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	IO. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
318154	GL		75255S	026285W		554	56	03	09	175	1970		016		0238					X0	0		0019	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB												
									14	505	927	-110			7		08							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S C						
		STD	0000	-0182	3389	2730	0007832		0000	14393	802													
175		OBS	0000	-0182	33891	2730				14393	802	132			006	184	050							
		STD	0010	-0185	3393	2733	0007504		0008	14393	797													
175		OBS	0010	-0185	33932	2733				14393	797	146			009	193	052							
		STD	0020	-0189	3405	2743	0006581		0015	14395	787													
175		OBS	0026	-0191	34102	2747				14396	782	171			004	247	058							
		STD	0030	-0192	3411	2748	0006116		0021	14396	780													
		STD	0050	-0195	3415	2751	0005811		0033	14398	771													
175		OBS	0051	-0195	34148	2751				14399	771	187			004	255	060							
		STD	0075	-0194	3417	2753	0005611		0047	14403	764													
		STD	0100	-0193	3418	2754	0005520		0061	14408	756													
175		OBS	0102	-0193	34181	2754				14408	755	198			002	275	062							
		STD	0125	-0193	3419	2754	0005464		0075	14412	756													
		STD	0150	-0194	3419	2754	0005407		0088	14416	757													
175		OBS	0154	-0194	34191	2755				14417	757	200			002	276	063							
		STD	0200	-0196	3424	2759	0004986		0114	14424	744													
175		OBS	T0205	-0196	34248	2759				14425	742	210			000	288	066							
175		OBS	T0236	-0196	34303	2764				14431	730	210			003	292	067							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH IN METERS	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLE'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	IO. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
318154	GL		75255S	026285W		554	56	03	09	232	1970		017		0235					X1	0 3		0020	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB												
						DT	SD	14	S04	904	-107			7		11								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S C						
		STD	0000	-0185	3382	2724	0008372		0000	14390														
232		OBS	0000	-0185	3382	2724				14390														
		STD	0010	-0185	3382	2724	0008365		0008	14392														
		OBS	0010	-0185	3382	2724				14392														
		STD	0020	-0187	3397	2736	0007200		0016	14395														
005		OBS	0025	-0189	3402	2741				14395														
		STD	0030	-0191	3406	2744	0006493		0023	14396														
		OBS	0030	-0191	3406	2744				14396														
		STD	0050	-0193	3407	2745	0006398		0036	14398														
		OBS	0050	-0193	3407	2745				14398														
		STD	0075	-0194	3408	2746	0006302		0052	14402														
		OBS	0075	-0194	3408	2746				14402														
		STD	0100	-0195	3408	2746	0006282		0067	14406														
		OBS	0100	-0195	3408	2746				14406														
		STD	0125	-0194	3413	2750	0005884		0083	14411														
		OBS	0125	-0194	3400P	2739P																		
		STD	0150	-0196	3417	2753	0005555		0097	14415														
		OBS	0150	-0196	3417	2753				14415														
		STD	0200	-0197	3424	2759	0004983		0123	14424														
		OBS	0200	-0197	3424	2759				14424														
		OBS	0233	-0198	3428	2762				14429														

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
318154	GL	74540S	027144W	554	47	03	10	125	1970			018		0420						X1	4	1		0021
						WATER		WIND		AIR TEMP. °C														
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
									19	S04	889	-087		7	08									
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ol/l}$	TOTAL-P $\mu\text{g} \cdot \text{ol/l}$	NO ₂ -N $\mu\text{g} \cdot \text{ol/l}$	NO ₃ -N $\mu\text{g} \cdot \text{ol/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ol/l}$	pH	S C						
		STD	0000	-0180	3363	2709	0009851		0000	14390	886													
125		OBS	0000	-0180	33629	2709				14390	886	111			008	171	052							
		STD	0010	-0178	3374	2718	0008995		0009	14394	850													
		STD	0020	-0176	3384	2725	0008263		0018	14398	819													
125		OBS	0020	-0176	33835	2725				14398	819	149			007	205	055							
		STD	0030	-0176	3389	2730	0007833		0026	14400	800													
		STD	0050	-0176	3400	2739	0006975		0041	14405	770													
125		OBS	0072	-0178						748														
		STD	0075	-0179	3411	2748	0006108		0057	14410	748													
		STD	0100	-0186	3419	2754	0005460		0072	14412	747													
125		OBS	0123	-0190	34235	2758				14414	746	207			007	297	065							
		STD	0125	-0190	3424	2758	0005051		0085	14415	747													
		STD	0150	-0189	3425	2759	0004960		0097	14419	751													
125		OBS	T0176	-0188	34259	2760				14424	753	205			004	282	064							
		STD	0200	-0188	3428	2762	0004702		0122	14429	747													
		STD	0250	-0187	3432	2765	0004368		0144	14438	734													
125		OBS	T0276	-0186	34332	2766				14443	728	211			013	293	067							
		STD	0300	-0184	3434	2767	0004177		0166	14448	722													
125		OBS	T0379	-0177	34374	2769				14465	703	217			015	302	070							
		STD	0400	-0153	3441	2771	0003712		0205	14480	642													
125		OBS	T0416	-0129	34452	2774				14495	583	223			006	314	081							

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
318154	GL	74540S	027144W	554	47	03	10	131	1970			018		0410						X1	0	3		0022
						WATER		WIND		AIR TEMP. °C														
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
						DT	SD	19	S04	889	-087		7	15										
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ol/l}$	TOTAL-P $\mu\text{g} \cdot \text{ol/l}$	NO ₂ -N $\mu\text{g} \cdot \text{ol/l}$	NO ₃ -N $\mu\text{g} \cdot \text{ol/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ol/l}$	pH	S C						
		STD	0000	-0183	3342	2692	0011452		0000	14386														
131		OBS	0000	-0183	3342	2692				14386														
		STD	0010	-0183	3342	2692	0011444		0011	14387														
		OBS	0010	-0183	3342	2692				14387														
		STD	0020	-0178	3367	2712	0009525		0022	14395														
006		OBS	0025	-0176	3372	2716				14397														
		STD	0030	-0179	3372	2716	0009132		0031	14397														
		OBS	0030	-0179	3372	2716				14397														
		OBS	0045	-0189	3392	2732				14397														
		STD	0050	-0187	3403	2741	0006719		0047	14401														
		OBS	0050	-0187	3403	2741				14401														
		STD	0075	-0187	3407	2745	0006395		0064	14405														
		OBS	0075	-0187	3407	2745				14405														
		STD	0100	-0189	3412	2749	0005990		0079	14409														
		OBS	0100	-0189	3412	2749				14409														
		STD	0125	-0192	3414	2750	0005812		0094	14412														
		OBS	0125	-0192	3414	2750				14412														
		STD	0150	-0195	3415	2751	0005711		0108	14415														
		OBS	0150	-0195	3415	2751				14415														
		STD	0200	-0188	3421	2756	0005237		0136	14428														
		OBS	0200	-0188	3421	2756				14428														
		STD	0250	-0185	3429	2762	0004602		0160	14438														
		OBS	0250	-0185	3429	2762				14438														
		STD	0300	-0186	3432	2765	0004338		0182	14447														
		OBS	0300	-0186	3432	2765				14447														
		STD	0400	-0176	3441	2772	0003625		0222	14469														
		OBS	0400	-0176	3441	2772				14469														
		OBS	0410	-0141	3443	2773				14488														

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	OBS. INDEX	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10°	1°	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT PER SEA		TYPE	AMT	
318154	GL	74523S	025471W	554	45	03	10	212	1970		019		0491					X2	5	8	0023
						WATER		WIND		BARO-METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB										
									20	503	891	-099		7	09						
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S.C.C.			
		STD	0000	-0181	3378	2721	0008680		0000	14392	872										
212	OBS	0000	-0181	33781	2721					14392	872	099			007	149	046				
	STD	0010	-0181	3379	2721		0008643		0009	14394	875										
	STD	0020	-0180	3379	2722		0008606		0017	14395	877										
212	OBS	0026	-0180	33791	2722					14397	879	092			008	155	046				
	STD	0030	-0181	3386	2727		0008051		0026	14397	852										
	STD	0050	-0189	3412	2749		0006024		0040	14401	752										
212	OBS	0051	-0189	34131	2750					14401	748	194			008	276	062				
	STD	0075	-0188	3416	2752		0005718		0054	14406	747										
	STD	0100	-0186	3419	2754		0005491		0068	14411	746										
212	OBS	0101	-0186	34187	2754					14412	746	202			008	302	063				
	STD	0125	-0188	3421	2756		0005286		0082	14415	750										
212	OBS	T0149	-0189	34237	2758					14419	752	200			007	279	063				
	STD	0150	-0189	3424	2758		0005052		0095	14419	752										
	STD	0200	-0187	3427	2761		0004803		0119	14429	746										
212	OBS	0201	-0187	34268	2761					14429	746	204			004	283	064				
	STD	0250	-0187	3428	2762		0004672		0143	14437	747										
212	OBS	T0299	-0187	34302	2763					14446	748	204			001	294	065				
	STD	0300	-0187	3430	2763		0004473		0166	14446	748										
	STD	0400	-0181	3434	2767		0004118		0209	14466	722										
212	OBS	T0404	-0181	34345	2767					14467	721	214			004	312	069				
212	OBS	T0487	-0188	34366	2769					14478	725	215			005	290	071				

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	OBS. INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318154	GL	74285S	025406W	554	45	03	11	100	1970		020		0506						X7	0	3		0024
						WATER		WIND		AIR TEMP. °C													
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						DT	SD	28	504	891	-143		7	15									
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S.C.C.						
		STD	0000	-0184	3382	2724	0008374	0000	14391														
100		OBS	0000	-0184	3382	2724			14391														
		STD	0010	-0184	3382	2724	0008367	0008	14392														
		OBS	0010	-0184	3382	2724			14392														
		STD	0020	-0184	3407	2744	0006439	0016	14398														
006		OBS	0025	-0184	3412	2749			14399														
		STD	0030	-0185	3412	2749	0006046	0022	14399														
		OBS	0030	-0185	3412	2749			14399														
		STD	0050	-0186	3420	2755	0005416	0033	14403														
		OBS	0050	-0186	3420	2755			14403														
		STD	0075	-0187	3422	2757	0005244	0047	14407														
		OBS	0075	-0187	3422	2757			14407														
		STD	0100	-0188	3423	2758	0005148	0060	14411														
		OBS	0100	-0188	3423	2758			14411														
		STD	0125	-0188	3425	2759	0004979	0072	14416														
		OBS	0125	-0188	3425	2759			14416														
		STD	0150	-0189	3426	2760	0004884	0085	14419														
		OBS	0150	-0189	3426	2760			14419														
		STD	0200	-0189	3430	2763	0004545	0108	14428														
		OBS	0200	-0189	3430	2763			14428														
		STD	0250	-0184	3437	2769	0003993	0130	14440														
		OBS	0250	-0184	3437	2769			14440														
		STD	0300	-0184	3438	2770	0003886	0149	14448														
		OBS	0300	-0184	3438	2770			14448														
		STD	0400	-0179	3442	2773	0003539	0187	14468														
		OBS	0400	-0179	3442	2773			14468														
		OBS	0467	-0168	3448	2777			14485														
		STD	0500	-0129	3451	2779	0003006	0419	14510														
		OBS	0500	-0129	3451	2779			14510														

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318154	GL	74285S	025406W	554	45	03	11	112	1970		020		0506					X7	6	8		0025	
						WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB											
								00		500	892	-128		7		11							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	S	C			
		STD	0000	-0174	3379	2722		0008603		0000	14395	840											
112		OBS	0000	-0174	33793	2722					14395	840	143			009	194	056					
112		OBS	0008	-0181	33848	2726					14394	847	145			009	195	056					
		STD	0010	-0181	3389	2730		0007835		0008	14395	833											
		STD	0020	-0181	3406	2744		0006522		0015	14399	779											
112		OBS	0022	-0181	34080	2745					14399	771	190			009	237	063					
		STD	0030	-0183	3412	2749		0006050		0022	14400	756											
112		OBS	0042	-0186	34174	2753					14402	739	203			009	256	065					
		STD	0050	-0186	3418	2753		0005569		0033	14403	739											
		STD	0075	-0187	3420	2755		0005398		0047	14407	739											
112		OBS	0093	-0187	34215	2756					14410	739	209			009	264	067					
		STD	0100	-0187	3422	2757		0005228		0060	14412	739											
		STD	0125	-0187	3423	2758		0005135		0073	14416	741											
112		OBS	0144	-0187	34236	2758					14419	742	210			008	265	066					
		STD	0150	-0187	3424	2758		0005042		0086	14420	743											
112		OBS	T0196	-0189	34270	2761					14427	744	210			005	268	067					
		STD	0200	-0189	3427	2761		0004753		0110	14428	743											
		STD	0250	-0185	3431	2764		0004418		0133	14439	735											
112		OBS	T0295	-0182	34350	2767					14448	728	213			003	270	068					
		STD	0300	-0182	3435	2767		0004114		0155	14449	727											
112		OBS	0397	-0179	34370	2769					14467	716	215			001	271	070					
		STD	0400	-0178	3437	2769		0003908		0195	14468	712											
112		OBS	T0498	-0127	34445	2773					14509	636	220			004	284	082					
		STD	0500		3445						635												
112		OBS	0504		34456						634	223				006	286	082					

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318154	GL	73587S	023390W	554	33	03	11	174	1970		021		0274						X7	6	8		0026
						WATER		WIND		BARO-METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
									00	500	897	-106		7	07								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg · dl/l	TOTAL-P μg · dl/l	NO ₃ -N μg · dl/l	NO ₃ -N μg · dl/l	SiO ₄ -Si μg · dl/l	pH	S	C					
		STD	0000	-0181	3390	2730	0007781	0000	14393	818													
174		OBS	0000	-0181	33898	2730			14393	818	161			014	248	061							
		STD	0010	-0182	3390	2730	0007788	0008	14395	821													
		STD	0020	-0182	3389	2730	0007803	0016	14396	825													
174		OBS	0021	-0182	33893	2730			14396	825	171			013	249	061							
		STD	0030	-0182	3399	2738	0007052	0023	14399	805													
174		OBS	0046	-0181	34118	2748			14404	778	193			009	269	064							
		STD	0050	-0181	3412	2748	0006042	0036	14405	777													
		STD	0075	-0183	3417	2753	0005637	0051	14409	768													
174		OBS	0096	-0184	34201	2755			14412	760	203			010	287	065							
		STD	0100	-0184	3421	2756	0005312	0064	14413	759													
		STD	0125	-0183	3425	2759	0004992	0077	14418	750													
174		OBS	0146	-0182	34278	2761			14422	742	209			011	291	068							
		STD	0150	-0182	3428	2761	0004749	0089	14423	740													
174		OBS	T0195	-0184	34311	2764			14430	724	212			010	294	069							
		STD	0200	-0184	3431	2764	0004460	0112	14431	724													
		STD	0250	-0182	3433	2766	0004304	0134	14440	724													
174		OBS	T0265	-0182	34335	2766			14443	724	212			074	283	069							

TABLE II.—Continued.

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
						10"	1'	MD	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
						10"	1'	MD	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
318154		GL	735875	023390W		554	33	03	11	184	1970		021		0274						X7	0	3	0027
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		ND. OBS. DEPTHS		SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB	VIS. CODE	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						DT	SD	00	500	897	-106	7	12											
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANDALTY-2107	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	D ₂ ml/l	PD ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C							
	184	STD	0000	-0181	3390	2731	0007765	0000	14393															
		OBS	0000	-0181	3390	2731			14393															
		STD	0010	-0181	3390	2731	0007759	0008	14395															
		OBS	0010	-0181	3390	2731			14395															
	005	STD	0020	-0182	3393	2733	0007543	0015	14397															
		OBS	0025	-0182	3394	2734			14398															
		STD	0030	-0179	3402	2740	0006828	0023	14401															
		OBS	0030	-0179	3402	2740			14401															
		OBS	0038	-0176	3404	2742			14404															
		STD	0050	-0180	3413	2749	0005968	0035	14405															
		OBS	0050	-0180	3413	2749			14405															
		STD	0075	-0185	3422	2757	0005249	0049	14408															
		OBS	0075	-0185	3422	2757			14408															
		STD	0100	-0184	3428	2762	0004775	0062	14414															
		OBS	0100	-0184	3428	2762			14414															
		STD	0125	-0184	3432	2765	0004453	0073	14419															
		OBS	0125	-0184	3432	2765			14419															
		STD	0150	-0184	3435	2767	0004208	0084	14423															
		OBS	0150	-0184	3435	2767			14423															
		STD	0200	-0183	3437	2769	0004027	0105	14432															
		OBS	0200	-0183	3437	2769			14432															
		STD	0250	-0183	3439	2770	0003843	0125	14441															
		OBS	0267	-0183	3439	2770			14444															

REFERENCE CTRY CODE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
10"	1'	MD	DAY	HR	1/10	CRUISE NO.	STATION NUMBER	DIR	HGT	PER		SEA	TYPE			AMT										
10"	1'	MD	DAY	HR	1/10	CRUISE NO.	STATION NUMBER	DIR	HGT	PER		SEA	TYPE			AMT										
318154	GL	733805	023400W		554	33	03	12	012	1970		022		1490						X2	6	18	0028			
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		ND. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB	VIS. CODE	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS										
									25	503	901	-110		7	13											
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANDALTY-2107	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	D ₂ ml/l	PD ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C									
		STD	0000	-0179	3363	2708	0009868	0000	14390	830																
	012	OBS	0000	-0179	33627	2708			14390	830	143			010	216	058										
		STD	0010	-0180	3363	2709	0009836	0010	14392	829																
		STD	0020	-0181	3365	2710	0009673	0020	14393	824																
		STD	0030	-0182	3369	2714	0009348	0029	14395	816																
	012	OBS	0030	-0182	33691	2714			14395	816	158			010	228	061										
		STD	0050	-0180	3396	2735	0007272	0046	14403	768																
		STD	0075	-0179	3421	2756	0005342	0062	14411	723																
	012	OBS	0081	-0178	34263	2760			14413	714	211			010	286	071										
		STD	0100	-0179	3428	2761	0004788	0074	14416	714																
		STD	0125	-0180	3431	2764	0004540	0086	14420	713																
		STD	0150	-0181	3433	2766	0004368	0097	14424	713																
	012	OBS	0183	-0183	34352	2767			14429	712	207			001	302	072										
		STD	0200	-0181	3436	2768	0004110	0118	14433	706																
		STD	0250	-0174	3437	2769	0004025	0138	14445	688																
	012	OBS	0285	-0169	34388	2770			14453	675	216			000	304	076										
		STD	0300	-0165	3439	2770	0003873	0158	14458	673																
	012	OBS	0387	-0122	34450	2774			14493	638	222			000	308	081										
		STD	0400	-0107	3447	2775	0003450	0195	14503	624																
	012	OBS	T0488	-0031	34550	2778			14554	552	234			000	314	092										
		STD	0500	-0027	3456	2779	0003160	0228	14557	549																
	012	OBS	T0596	0005	34601	2780			14589	524	231			000	321	098										
		STD	0600	0007	3460	2780	0003039	0259	14590	522																
		STD	0700	0047	3464	2781	0003034	0289	14626	490																
	012	OBS	0796	0068	34677	2783			14652	470	235			000	325	113										
		STD	0800	0068	3468	2783	0002910	0319	14652	470																
		STD	0900	0061	3468	2783	0002870	0348	14666	468																
		STD	1000	0055	3468	2784	0002829	0376	14680	466																
	012	OBS	T1002	0055	34681	2784			14681	466	238			001	321	117										
		STD	1100	0052	3468	2784	0002812	0405	14696	470																
		STD	1200	0047	3467	2783	0002852	0433	14710	474																
	012	OBS	1259	0043	34667	2783			14718	477	237			000	325	125										
		STD	1300	0038	3467	2784	0002816	0461	14723	479																
		STD	1400	0029	3466	2784	0002777	0489	14736	484																
	012	OBS	T1468	0025	34657	2784			14745	488	236			001	332	122										
	012	OBS	T1487	0024	34666	2784			14748	492	235			000	328	122										

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	DUTY OFFICER	MARS DEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER		
CTRY CODE	IO. NO.					10°	1'	MO	DAY	HR. 1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT				
318154	GL	7338 S	02340 W	554	33	03	12	020	1970		022		1490							X2	X	3	0029			
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
						DT	SD	00	500		903	-111					7	26								
MESSING'S TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°		Σ Δ D OYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₃ -N μg - at/l	NO ₃ -N μg - at/l	Si O ₄ -Si μg - at/l	pH	3 C								
		STD	0000	-0181	3359	2705	0010149		0000	14389																
020		OBS	0000	-0181	3359	2705				14389																
		STD	0010	-0181	3359	2705	0010141		0010	14391																
		OBS	0010	-0181	3359	2705				14391																
		STD	0020	-0181	3361	2707	0009980		0020	14392																
007		OBS	0025	-0181	3362	2708				14393																
		STD	0030	-0181	3362	2708	0009896		0030	14394																
		OBS	0030	-0181	3362	2708				14394																
		OBS	0044	-0182	3377	2720				14398																
		STD	0050	-0174	3431	2764	0004601		0045	14411																
		OBS	0050	-0174	3431	2764				14411																
		OBS	0054	-0165	3430	2763				14415																
		STD	0075	-0174	3429	2762	0004740		0056	14415																
		OBS	0075	-0174	3429	2762				14415																
		STD	0100	-0180	3433	2765	0004402		0068	14416																
		OBS	0100	-0180	3433	2765				14416																
		STD	0125	-0182	3435	2767	0004228		0079	14420																
		OBS	0125	-0182	3435	2767				14420																
		STD	0150	-0182	3438	2770	0003983		0089	14424																
		OBS	0150	-0182	3438	2770				14424																
		STD	0200	-0179	3441	2772	0003732		0108	14435																
		OBS	0200	-0179	3441	2772				14435																
		STD	0250	-0175	3442	2773	0003639		0127	14445																
		OBS	0250	-0175	3442	2773				14445																
		STD	0300	-0168	3446	2776	0003328		0144	14457																
		OBS	0300	-0168	3446	2776				14457																
		STD	0400	-0122	3452	2779	0003003		0176	14496																
		OBS	0400	-0122	3452	2779				14496																
		STD	0500	-0028	3462	2783	0002700		0204	14558																
		OBS	0500	-0028	3462	2783				14558																
		STD	0600	0007	3467	2786	0002534		0230	14591																
		OBS	0600	0007	3467	2786				14591																
		STD	0700	0051	3472	2787	0002470		0255	14629																
		OBS	0700	0051	3472	2787				14629																
		STD	0800	0066	3474	2788	0002446		0280	14652																
		OBS	0800	0066	3474	2788				14652																
		STD	0900	0063	3474	2788	0002435		0304	14668																
		OBS	0900	0063	3474	2788				14668																
		STD	1000	0056	3474	2789	0002389		0328	14681																
		OBS	1000	0056	3474	2789				14681																
		STD	1100	0048	3474	2789	0002331		0352	14695																
		OBS	1100	0048	3474	2789				14695																
		STD	1200	0043	3474	2789	0002297		0375	14709																
		OBS	1200	0043	3474	2789				14709																
		STD	1300	0037	3474	2790	0002251		0398	14723																
		OBS	1300	0037	3474	2790				14723																
		STD	1400	0025	3473	2790	0002223		0420	14735																
		OBS	1400	0025	3473	2790				14735																
		OBS	1480	0022	3473	2790				14747																

TABLE II.—Continued.

MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t ?	$\Sigma \Delta \sigma$ QYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ol/l}$	TOTAL-P $\mu\text{g} \cdot \text{ol/l}$	NO ₃ -N $\mu\text{g} \cdot \text{ol/l}$	NO ₃ -N $\mu\text{g} \cdot \text{ol/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ol/l}$	pH	S C
		STD	0000	-0183	3396	2736	0007292	0000	14393	789							
036		OBS	0000	-0183	33961	2736			14393	789	184		012	252	074		
		STD	0010	-0189	3397	2737	0007172	0007	14392	776							
036		OBS	0010	-0189	33974	2737			14392	776	189		006	255	073		
		STD	0020	-0188	3397	2737	0007175	0014	14394	774							
036		OBS	0025	-0187	33973	2737			14396	773	190		008	252*	074		
		STD	0030	-0182	3408	2745	0006360	0021	14400	747							
		STD	0050	-0169	3440	2771	0003893	0031	14414	667							
036		OBS	0050	-0169	34404	2771			14414	667	213		005	289	080		
		STD	0075	-0170	3441	2772	0003832	0041	14418	658							
036		OBS	0099	-0170	34433	2774			14422	650	221		002	289	082		
		STD	0100	-0169	3444	2774	0003626	0050	14423	650							
		STD	0125	-0154	3448	2777	0003343	0059	14435	646							
036		OBS	0149	-0140	34515	2779			14446	635	226		000	295	085		
		STD	0150	-0139	3452	2780	0003045	0067	14447	634							
036		OBS	0199	-0072	3446P	2772P			586	232			000	296	092		
		STD	0200	-0070	3458	2782	0002843	0082	14488	585							
		STD	0250	-0002	3463	2783	0002797	0096	14528	524							
036		OBS	T0298	0043	34660	2783			14557	485	243		000	324	105		
		STD	0300	0044	3466	2783	0002835	0110	14558	484							
036		OBS	T0395	0072	34689	2783			14587	466	245		000	313	109		
		STD	0400	0072	3469	2784	0002812	0138	14588	466							
036		OBS	T0499	0069	34691	2784			14603	464	245		000	317	114		
		STD	0500	0069	3469	2784	0002804	0166	14603	464							
036		OBS	T0597	0063	34666	2782			14616	470	248		000	307	117		
		STD	0600	0063	3467	2782	0002924	0195	14617	470							
		STD	0700	0055	3468	2784	0002800	0224	14630	469							
036		OBS	0793	0049	34685	2785			14643	468	245		006	323	120		
		STD	0800	0049	3468	2784	0002764	0251	14644	468							
		STD	0900	0042	3468	2785	0002716	0279	14657	471							
036		OBS	T0995	0036	34677	2785			14671	474	248		009	325	123		
		STD	1000	0036	3468	2785	0002697	0306	14672	474							
		STD	1100	0030	3467	2785	0002696	0333	14686	481							
		STD	1200	0025	3467	2784	0002702	0360	14700	488							
036		OBS	T1250	0022	34662	2784			14707	491	245		003	326	124		

TABLE II.—Continued.

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT	MARSDEN		STATION TIME			YEAR	ORIGINATOR'S		DEPTH	MAX.	WAVE			WEA-	CLOUD	NODC	
CODE	NO.	CODE	1/10	1/10	DIR	SQ	NO.	MO	DAY	HR./10		CRUISE	STATION	TO	DEPTH	DIR	HGT	PER	SEA	TYPE	AMT	STATION
318154	GL	72082S	024088W	554	24	03	13	050	1970			023		4078						X7	0 3	0031
					WATER		WIND		BARO-		AIR TEMP. °C		VIS.		NO.		SPECIAL					
					COLOR	TRANS.	CIR.	SPEED	METER		DRY		WET		OBS.		OBSERVATIONS					
					DT	SU	13	S04	922	-068		7	33									
MESSAGE	CAST	CARQ	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME	Σ Δ D	SOUND	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₃ -N	NO ₃ -N	SiO ₄ -Si	pH	S					
TIME	NO.	TYPE					ANOMALY-σ _t	YN, M. x 10 ³	VELOCITY		μg · ml ⁻¹	μg · ml ⁻¹	μg · ml ⁻¹	μg · ml ⁻¹	μg · ml ⁻¹		CO					
HR. 1/10																						
		STD	0000	-0184	3400	2739	0006990	0000	14393													
	050	OBS	0000	-0184	3400	2739			14393													
		STD	0010	-0184	3400	2739	0006983	0007	14395													
		OBS	0010	-0184	3400	2739			14395													
		STD	0020	-0183	3413	2749	0005981	0013	14399													
	009	OBS	0025	-0182	3422	2757			14401													
		STD	0030	-0179	3432	2765	0004524	0019	14405													
		OBS	0030	-0179	3432	2765			14405													
		STD	0050	-0176	3446	2776	0003445	0027	14412													
		OBS	0050	-0176	3446	2776			14412													
		STD	0075	-0174	3448	2778	0003283	0035	14417													
		OBS	0075	-0174	3448	2778			14417													
		STD	0100	-0164	3452	2780	0002991	0043	14427													
		OBS	0100	-0164	3452	2780			14427													
		STD	0125	-0149	3454	2782	0002871	0050	14438													
		OBS	0125	-0149	3454	2782			14438													
		STD	0150	-0139	3455	2782	0002815	0057	14447													
		OBS	0150	-0139	3455	2782			14447													
		STD	0200	-0099	3465	2789	0002184	0070	14476													
		OBS	0200	-0099	3465	2789			14476													
		STD	0250	-0014	3470	2789	0002200	0081	14524													
		OBS	0250	-0014	3470	2789			14524													
		STD	0300	0041	3472	2788	0002370	0092	14557													
		OBS	0300	0041	3472	2788			14557													
		STD	0400	0070	3474	2788	0002420	0116	14587													
		OBS	0400	0070	3474	2788			14587													
		STD	0500	0068	3474	2788	0002421	0140	14603													
		OBS	0500	0068	3474	2788			14603													
		STD	0600	0063	3474	2788	0002398	0165	14618													
		OBS	0600	0063	3474	2788			14618													
		STD	0700	0055	3474	2789	0002350	0188	14631													
		OBS	0700	0055	3474	2789			14631													
		STD	0800	0049	3474	2789	0002314	0212	14645													
		OBS	0800	0049	3474	2789			14645													
		STD	0900	0041	3474	2789	0002259	0234	14658													
		OBS	0900	0041	3474	2789			14658													
		STD	1000	0036	3474	2790	0002226	0257	14672													
		OBS	1000	0036	3474	2790			14672													
		STD	1100	0028	3474	2790	0002165	0279	14686													
		OBS	1100	0028	3474	2790			14686													
		STD	1200	0024	3474	2790	0002135	0300	14701													
		OBS	1200	0024	3474	2790			14701													
		STD	1300	0019	3473	2790	0002169	0322	14715													
		OBS	1300	0019	3473	2790			14715													
		STD	1400	0014	3473	2790	0002126	0343	14730													
		OBS	1400	0014	3473	2790			14730													
		STD	1500	0011	3473	2790	0002098	0364	14745													
		OBS	1500	0011	3473	2790			14745													
		OBS	1600	0060P	3473	2787P																
		OBS	1700	0001	3473	2791			14775													
		STD	1750	0000	3473	2790	0002028	0416	14783													
		OBS	1800	-0001	3472	2790			14791													
		OBS	1900	-0005	3472	2790			14806													
		STD	2000	-0007	3472	2790	0001985	0466	14822													
		OBS	2000	-0007	3472	2790			14822													
		OBS	2100	-0011	3472	2791			14838													
		OBS	2200	-0013	3472	2791			14854													
		OBS	2300	-0014	3472	2791			14871													
		OBS	2400	-0016	3472	2791			14887													

TABLE II.—Continued.

REFERENCE	SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	PORT INCH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318154	GL	711485	024320W	554	14	03	13	210	1970		024		4224		03	2	6		X1	7	14	0032
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS.		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	METER (mb)		DRY BULB	WET BULB	CODE												

TABLE II.—Continued.

REFERENCE CITY CODE	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DRAFT METER	MARS DEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT		
					COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	BARO- METER mmHg													AIR TEMP. °C	
318154	GL	70252S	024331W	554	04	03	14	178	1970		025		4279		09	4	6		X1	5	6		0033

TABLE II.—Continued.

REFERENCE CRST CODE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT DUECT HOUR	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER	SEA		TYPE	AMT		
					WATER COLOR CODE	TRANS. (m)	WIND DIR.	SPEED OR FORCE	BARO- METER (mba)														AIR TEMP. °C DRY BULB WET BULB
318154	GL	69312S	024572W	518	94	03	15	080	1970		026		2500		09	4	6		X2	7	18		0034

TABLE II.—Continued.

REFERENCE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
					10"	1"	MO	DAY		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
318154	GL	710335	013160W	553	13	03	17	037	1970		027	1920					X4	X9		0035
					WATER		WIND		BARO- METER (mbal)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB									
							11	526	776	-007		3	14							
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ σ OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	Si C		
		STD	0000	-0177	3399	2738	0007083		0000	14396	794									
037		OBS	0000	-0177	33990	2738	14396			794	189				016	258	063			
037		OBS	0009	-0177	33988	2738	14398			794	191				016	262	063			
		STD	0010	-0177	3399	2738	0007092		0007	14398	794									
		STD	0020	-0176	3399	2738	0007086		0014	14400	794									
037		OBS	0024	-0176	33988	2738	14401			794	190				016	265	063			
		STD	0030	-0176	3399	2738	0007080		0021	14402	796									
037		OBS	0047	-0177	33989	2738	14404			798	189				015	268	064			
		STD	0050	-0176	3400	2739	0006975		0035	14405	796									
		STD	0075	-0170	3407	2744	0006438		0052	14413	778									
037		OBS	0094	-0169	34133	2749	14418			764	203				013	271	065			
		STD	0100	-0171	3416	2751	0005730		0067	14418	757									
		STD	0125	-0176	3426	2760	0004934		0081	14421	734									
037		OBS	0141	-0178	34306	2763	14424			725	213				011	288	064			
		STD	0150	-0179	3431	2764	0004528		0092	14425	726									
037		OBS	T0188	-0180	34329	2765	14431			727	212				004	293	065			
		STD	0200	-0179	3433	2765	0004343		0115	14433	722									
		STD	0250	-0176	3436	2768	0004094		0136	14444	700									
037		OBS	T0283	-0174	34372	2769	14450			688	212				002	298	074			
		STD	0300	-0172	3438	2769	0003925		0156	14454	684									
037		OBS	0375	-0154	34419	2772	14476			660	214				000	293	077			
		STD	0400	-0143	3444	2773	0003523		0193	14485	649									
037		OBS	T0474	-0100	34490	2776	14518			610	220				000	301	082			
		STD	0500	-0077	3451	2777	0003260		0227	14534	592									
037		OBS	T0562	-0029	34563	2779	14567			552	222				000	307	091			
		STD	0600	-0001	3459	2790	0003084		0459	14586	528									
		STD	0700	0053	3465	2781	0003011		0289	14629	483									
037		OBS	T0748	0068	34670	2782	14644			470	232				000	317	108			
		STD	0800	0065	3467	2782	0002955		0319	14651	471									
		STD	0900	0059	3467	2783	0002896		0348	14665	473									
037		OBS	T0946	0056	34675	2783	14671			474	234				006	310	115			
		STD	1000	0053	3468	2784	0002842		0377	14679	475									
		STD	1100	0046	3468	2784	0002784		0405	14693	477									
037		OBS	T1190	0040	34678	2784	14705			479	232				000	315	122			

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	WAVE INDIC	MARSEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10°	1°	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE		AMT
318154	GL		710335	01316 W		553	13	03	17	047	1970	027	1920						X1	0	3	0036	
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
						DT	SD	00	500		916	-056					7	28					
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°		Σ Δ ρ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	Si O ₄ -Si μg - ml/l	pH						
		STD	0000	-0174	3405	2743	0006629		0000	14399													
047		OBS	0000	-0174	3405	2743				14399													
		STD	0010	-0174	3405	2743	0006622		0007	14400													
		OBS	0010	-0174	3405	2743				14400													
008		STD	0020	-0174	3405	2743	0006616		0013	14402													
		OBS	0025	-0174	3405	2743				14403													
		STD	0030	-0174	3405	2743	0006609		0020	14404													
		OBS	0030	-0174	3405	2743				14404													
		STD	0050	-0174	3405	2743	0006597		0033	14407													
		OBS	0050	-0174	3405	2743				14407													
		STD	0075	-0172	3407	2744	0006432		0049	14412													
		OBS	0075	-0172	3407	2744				14412													
		STD	0100	-0176	3428	2761	0004796		0063	14418													
		OBS	0100	-0176	3428	2761				14418													
		STD	0125	-0181	3435	2767	0004231		0075	14420													
		OBS	0125	-0181	3435	2767				14420													
		STD	0150	-0180	3436	2768	0004142		0085	14425													
		OBS	0150	-0180	3436	2768				14425													
		STD	0200	-0181	3438	2770	0003956		0105	14433													
		OBS	0200	-0181	3438	2770				14433													
		STD	0250	-0175	3440	2771	0003792		0125	14445													
		OBS	0250	-0175	3440	2771				14445													
		STD	0300	-0169	3442	2773	0003630		0143	14456													
		OBS	0300	-0169	3442	2773				14456													
		STD	0400	-0130	3450	2778	0003120		0177	14492													
		OBS	0400	-0130	3450	2778				14492													
		STD	0500	-0074	3458	2782	0002746		0206	14536													
		OBS	0500	-0074	3458	2782				14536													
		STD	0600	-0010	3462	2783	0002800		0234	14583													
		OBS	0600	-0010	3462	2783				14583													
		STD	0700	0048	3467	2783	0002823		0262	14627													
		OBS	0700	0048	3467	2783				14627													
		STD	0800	0074	3470	2784	0002809		0290	14655													
		OBS	0800	0074	3470	2784				14655													
		STD	0900	0070	3471	2785	0002716		0318	14671													
		OBS	0900	0070	3471	2785				14671													
		STD	1000	0059	3471	2786	0002637		0345	14682													
		OBS	1000	0059	3471	2786				14682													
		STD	1100	0051	3471	2786	0002580		0371	14696													
		OBS	1100	0051	3471	2786				14696													
		STD	1200	0044	3470	2786	0002603		0397	14709													
		OBS	1200	0044	3470	2786				14709													
		STD	1300	0033	3471	2787	0002438		0422	14721													
		OBS	1300	0033	3471	2787				14721													
		STD	1400	0030	3470	2787	0002490		0447	14737													
		OBS	1400	0030	3470	2787				14737													
		STD	1500	0023	3470	2787	0002429		0471	14750													
		OBS	1500	0023	3470	2787				14750													
		STD	1600	0017	3470	2788				14765													
		OBS	1700	0011	3470	2788				14779													
		STD	1750	0009	3470	2788	0002334		0531	14787													
		OBS	1800	0007	3469	2787				14794													
		OBS	1900	0006	3469	2787				14811													

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSEEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CITY CODE	IO. NO.					10"	1"	MO	DAY	HR, 1/10	CRUISE NO.		STATION NUMBER	DIR			HGT	PER	SEA	TYPE		AMT		
318154	GL		7104 S	012091W	553	12	03	17	110	1970			028		1189		36	0	X		X1	0	3	0037
						WATER		WIND		AIR TEMP. °C														
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	BARO- METER (mbars)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
						DT	SD	08	S04	933	-048		7	23										
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ σ _t M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	1 CLO							
110		STD	0000	-0180	3352	2700	0010689	0000	14388															
		OBS	0000	-0180	3352	2700			14388															
		STD	0010	-0180	3352	2700	0010681	0011	14390															
007		OBS	0010	-0180	3352	2700			14390															
		STD	0020	-0181	3354	2701	0010518	0021	14391															
		OBS	0025	-0182	3355	2702			14392															
		STD	0030	-0181	3355	2702	0010434	0032	14393															
		OBS	0030	-0181	3355	2702			14393															
		STD	0050	-0180	3356	2703	0010345	0053	14397															
		OBS	0050	-0180	3356	2703			14397															
		STD	0075	-0179	3359	2705	0010098	0078	14402															
		OBS	0075	-0179	3359	2705			14402															
		STD	0100	-0174	3361	2707	0009939	0103	14409															
		OBS	0100	-0174	3361	2707			14409															
		STD	0125	-0170	3369	2713	0009319	0127	14416															
		OBS	0125	-0170	3369	2713			14416															
		STD	0150	-0168	3372	2716	0009077	0150	14422															
		OBS	0150	-0168	3372	2716			14422															
		OBS	0196	-0166	3385	2726			14432															
		STD	0200	-0171	3386	2727	0007964	0193	14431															
		OBS	0200	-0171	3386	2727			14431															
		OBS	0208	-0176	3394	2734			14431															
		OBS	0225	-0167	3404	2742			14439															
		STD	0250	-0176	3410	2747	0006081	0228	14440															
		OBS	0250	-0176	3410	2747			14440															
		STD	0300	-0179	3424	2758	0004971	0256	14449															
		OBS	0300	-0179	3424	2758			14449															
		STD	0400	-0186	3434	2766	0004124	0301	14464															
		OBS	0400	-0186	3434	2766			14464															
		STD	0500	-0182	3438	2770	0003773	0341	14483															
		OBS	0500	-0182	3438	2770			14483															
		STD	0600	-0176	3441	2772	0003511	0377	14503															
		OBS	0600	-0176	3441	2772			14503															
		STD	0700	-0168	3446	2776	0003112	0410	14524															
		OBS	0700	-0168	3446	2776			14524															
		STD	0800	-0117	3454	2781	0002719	0439	14566															
		OBS	0800	-0117	3454	2781			14566															
		STD	0900	-0029	3462	2783	0002642	0466	14624															
		OBS	0900	-0029	3462	2783			14624															
		STD	1000	0029	3469	2786	0002544	0492	14669															
		OBS	1000	0029	3469	2786			14669															
		OBS	1066	0052	3470	2786			14690															

TABLE II.—Continued.

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER
						10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT		
						COLOR CODE	TRANSL (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)													AIR TEMP. °C	
318154		GL	71100S	012227W	553	12	03	17	162	1970		029		0465		07	0	2		X2	5	7		0038
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANSL (m)	DIR.	SPEED OR FORCE	DAY BULB	WET BULB	DAY BULB	WET BULB											
								08	504	937	-034			7	09									
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DTN. M. K 10 ³	SOUND VELOCITY	D ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	SIO ₄ -Si μg - dl/l	pH	S C							
		STD	0000	-0181	3349	2697	0010948	0000	14387	808														
	162	OBS	0000	-0181	33486	2697			14387	808	167			019	236	052								
		STD	0010	-0180	3350	2698	0010865	0011	14390	812														
	162	OBS	0014	-0180	33500	2698			14390	813	169			016	240	052								
		STD	0020	-0181	3350	2698	0010796	0022	14391	813														
	162	OBS	0027	-0181	33509	2699			14392	813	167			018	241	052								
		STD	0030	-0179	3352	2700	0010669	0032	14394	813														
	162	OBS	0048	-0171	33591	2705			14402	811	175			015	248	054								
		STD	0050	-0171	3359	2705	0010113	0053	14402	810														
	162	OBS	0070	-0167	33612	2707			14407	802	175			017	237	054								
		STD	0075	-0167	3362	2708	0009898	0078	14408	802														
		STD	0100	-0166	3369	2713	0009345	0102	14414	799														
	162	OBS	0113	-0166	33729	2716			14417	797	179			016	248	057								
		STD	0125	-0167	3377	2720	0008715	0125	14419	790														
		STD	0150	-0168	3385	2726	0008083	0146	14424	778														
		STD	0200	-0170	3401	2739	0006820	0183	14433	759														
	162	OBS	T0205	-0170	34022	2740			14434	757	204			011	275	063								
		STD	0250	-0179	3418	2753	0005461	0214	14440	749														
	162	OBS	T0294	-0184	34263	2760			14446	741	211			015	292	066								
		STD	0300	-0184	3427	2761	0004726	0239	14447	740														
	162	OBS	T0351	-0186	34282	2762			14455	732	211			009	286	068								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318154		GL	70575S	011216W	553	01	03	17	227	1970		030		0320		36	0	X		X2	0	3	0039
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DAY BULB	WET BULB												
						DT	SD	11	509	955	-044		7	15									
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ D DTN. M. $\times 10^3$	SOUND VELOCITY	D_2 ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	S C					
		STD	0000	-0182	3354	2701	0010531		0000	14388													
	227	OBS	0000	-0182	3354	2701				14388													
		STD	0010	-0182	3354	2701	0010524		0011	14389													
		OBS	0010	-0182	3354	2701				14389													
		STD	0020	-0182	3355	2702	0010462		0021	14391													
	005	OBS	0025	-0182	3355	2702				14392													
		STD	0030	-0182	3355	2702	0010432		0031	14393													
		OBS	0030	-0182	3355	2702				14393													
		STD	0050	-0181	3356	2703	0010342		0052	14397													
		OBS	0050	-0181	3356	2703				14397													
		STD	0075	-0177	3362	2708	0009873		0078	14404													
		OBS	0075	-0177	3362	2708				14404													
		STD	0100	-0162	3370	2714	0009280		0101	14416													
		OBS	0100	-0162	3370	2714				14416													
		STD	0125	-0167	3375	2718	0008867		0124	14418													
		OBS	0125	-0167	3375	2718				14418													
		OBS	0142	-0174	3383	2725				14419													
		STD	0150	-0172	3384	2726	0008147		0145	14422													
		OBS	0150	-0172	3384	2726				14422													
		OBS	0173	-0145	3395	2734				14440													
		STD	0200	-0162	3402	2740	0006767		0183	14437													
		OBS	0200	-0162	3402	2740				14437													
		OBS	0217	-0182	3422	2757				14433													
		STD	0250	-0184	3425	2759	0004910		0212	14438													
		OBS	0250	-0184	3425	2759				14438													
		OBS	0282	-0186	3428	2762				14443													

TABLE II.—Continued.

REFERENCE	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DRIFT DEGREE	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S' MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
					10°	1°	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA		TYPE	AMT				
318154	GL	70210S	008550W	552	08	03	18	167	1970		031	0503	28	2	7			X1	5	5		0040			
					WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
					COLOR CODE	TRANL (m)	DIR.	SPEED OF FORCE		CRY BULB	WET BULB														
								12	504	972	-053	7	10												
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTN (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-30°	$\Sigma \Delta \rho$ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	TOTAL-P µg - dl/l	NO ₃ -N µg - dl/l	NO ₃ -N µg - dl/l	SiO ₄ -Si µg - dl/l	pH	S C								
		STD	0000	-0173	3365	2710	0009697	0000	14394	804															
167		OBS	0000	-0173	33651	2710			14394	804	166		013	237	053										
		STD	0010	-0172	3365	2710	0009685	0010	14396	801															
		STD	0020	-0172	3365	2710	0009670	0019	14397	798															
		STD	0030	-0171	3365	2710	0009658	0029	14400	797															
167		OBS	0049	-0170	33656	2711			14403	795	169		012	236	053										
		STD	0050	-0170	3366	2711	0009600	0048	14403	795															
		STD	0075	-0169	3366	2711	0009586	0072	14408	798															
167		OBS	0089	-0168	33672	2712			14411	799	171		012	237	054										
		STD	0100	-0169	3368	2712	0009416	0096	14413	799															
167		OBS	0110	-0169	33688	2713			14414	799	169		011	235	053										
		STD	0125	-0159	3373	2716	0009043	0119	14422	797															
167		OBS	0131	-0156	33756	2718			14425	795	174		012	242	054										
		STD	0150	-0156	3384	2725	0008193	0141	14429	784															
167		OBS	0174	-0159	33955	2735			14433	770	192		012	264	059										
		STD	0200	-0170	3410	2747	0006131	0176	14434	759															
167		OBS	T0217	-0176	34167	2752			14435	745	207		012	298	065										
		STD	0250	-0182	3422	2757	0005146	0205	14439	665															
167		OBS	T0293	-0184	34269	2761			14446	622	213		009	302	066										
		STD	0300	-0182	3428	2761	0004656	0229	14448	634															
167		OBS	T0370	-0170	34331	2765			14466	717	219		003	307	070										
		STD	0400	-0167	3434	2766	0004191	0273	14473	713															
167		OBS	T0471	-0167	34354	2767			14485	705	215		003	308	072										

TABLE II.—Continued.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	MARS SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER	
CRUISE NO.	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
318154	GL	702085	007298W	552	07	03	19	015	1970		032	0740		00	0	X		X2	0	3		0041	
WATER					WIND			BARO- METER		AIR TEMP. °C			VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
COLOR CODE	TRANS. 1m	DIR.	SPEED OR FORCE						DRY BULB	WET BULB													
DT	SD	00	S00	940	-050							7	27										
MESSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _θ	Σ Δ σ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₃ -N μg - at/l	NO ₂ -N μg - at/l	SIO ₄ -Si μg - at/l	PH	S CC						
015		STD	0000	-0179	3359	2705	0010153	0000	14390														
		OBS	0000	-0179	3359	2705			14390														
		STD	0010	-0179	3359	2705	0010146	0010	14392														
		OBS	0010	-0179	3359	2705			14392														
007		STD	0020	-0174	3368	2713	0009458	0020	14397														
		OBS	0025	-0173	3370	2714			14398														
		STD	0030	-0172	3370	2714	0009302	0029	14400														
		OBS	0030	-0172	3370	2714			14400														
		STD	0050	-0167	3380	2722	0008533	0047	14407														
		OBS	0050	-0167	3380	2722			14407														
		STD	0075	-0154	3391	2731	0007708	0067	14419														
		OBS	0075	-0154	3391	2731			14419														
		STD	0100	-0149	3394	2733	0007478	0086	14426														
		OBS	0100	-0149	3394	2733			14426														
		STD	0125	-0140	3404	2741	0006726	0104	14435														
		OBS	0125	-0140	3404	2741			14435														
		STD	0150	-0135	3407	2743	0006499	0121	14442														
		OBS	0150	-0135	3407	2743			14442														
		OBS	0171	-0132	3412	2747			14448														
		OBS	0191	-0172	3419	2754			14433														
		STD	0200	-0174	3422	2756	0005201	0150	14434														
		OBS	0200	-0174	3422	2756			14434														
		STD	0250	-0180	3431	2764	0004464	0174	14441														
		OBS	0250	-0180	3431	2764			14441														
		STD	0300	-0178	3434	2766	0004211	0196	14451														
		OBS	0300	-0178	3434	2766			14451														
		STD	0400	-0169	3439	2770	0003803	0236	14472														
		OBS	0400	-0169	3439	2770			14472														
		OBS	0435	-0128	3448	2776			14499														
		OBS	0443	-0132	3444P	2773P																	
		OBS	0451	-0111	3452	2779			14510														
		OBS	0490	-0107	3457	2783			14519														
		STD	0500	-0074	3457	2781	0002821	0269	14536														
		OBS	0500	-0074	3457	2781			14536														
		OBS	0526	-0068	3457	2781			14543														
		OBS	0546	-0034	3461	2783			14563														
		OBS	0569	-0030	3462	2784			14568														
		OBS	0577	-0024	3466	2786			14573														
		STD	0600	0028	3467	2785	0002676	0297	14601														
		OBS	0600	0028	3467	2785			14601														
		STD	0700	0051	3469	2785	0002695	0323	14628														
		OBS	0700	0051	3469	2785			14628														
		OBS	0722	0051	3470	2786			14632														

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